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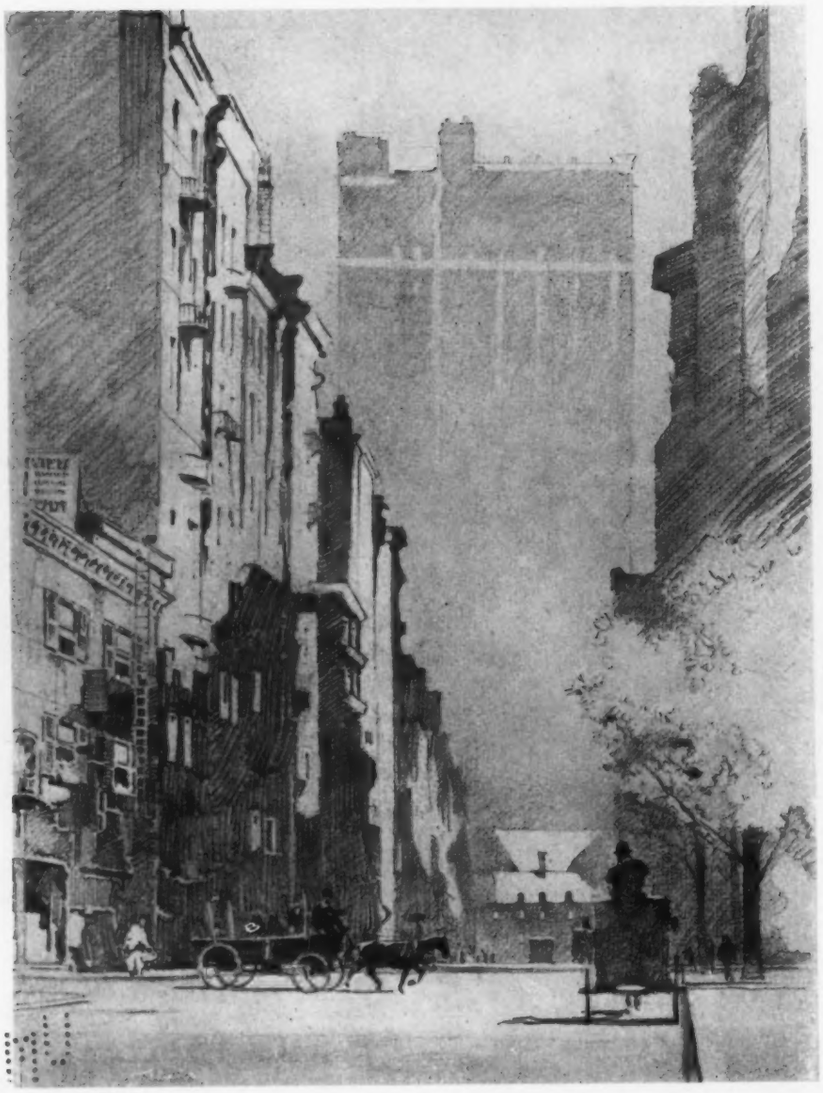


LOOKING SOUTH FROM WASHINGTON SQUARE,
NEW YORK CITY

From Pencil Drawing by Harold R. Shurtleff

The
ARCHITECTURAL
FORUM

VOLUME XXXIII OCTOBER 1920 NUMBER 4

Some Lesser English Churches

FROM DESIGNS BY GILBERT SCOTT, A.R.A., ARCHITECT

By R. RANDAL PHILLIPS

MR. GILBERT SCOTT is the third of a line of modern English church architects who have borne the same name, each distinguished in his generation, though each represents a different kind of achievement. In the heyday of the Gothic revival it was Sir Gilbert Scott who rose to fame. He it was who wrought mightily in the restoration of our cathedrals and parish churches. We are still astounded by the record of his activities but we think rather sadly of the wholesale making anew of ancient buildings that was the inevitable accompaniment of revival enthusiasm. His son, George Gilbert Scott, is a far happier memory. We have indeed in his best known church, St. Agnes', Kennington, a splendid piece of modern Gothic free from pedantry, with a warmth and life about it that Sir Gilbert could never have compassed. The present Mr. Gilbert Scott had, therefore, in his father's work, a much more exhilarating model than in what his grandfather did. He too, in one sense, is carrying on the same torch that was lighted in mid-Victorian England, but he reflects the different spirit of our own times. The zeal which set new designing in what they conceived to be the thirteenth or fourteenth century manner, and which made them dogmatic about the hollow of a moulding or the precise ornament for a capital, finds no exponent today. Gothic is no longer a style to be copied with minute exactitude, but a manner of building made to suit the needs of the modern church.

It seems likely that Liverpool Cathedral will constitute Mr. Scott's magnum opus, since it is the largest Protestant cathedral undertaken in England since the reformation, and that as yet it has advanced no further than the choir and lady chapel. But though this great fabric has absorbed his chief attention since he won the commission as a young man of twenty-two,—that was in 1905,—he has nevertheless designed and carried out a number of lesser ecclesiastical buildings. Five of these are here illustrated and brought under consideration. They are all pre-war churches, as might be supposed, remembering the five years' ban on building other than that for some sort of war purpose, and remembering also that since the armistice there has been no church building of any kind in England.

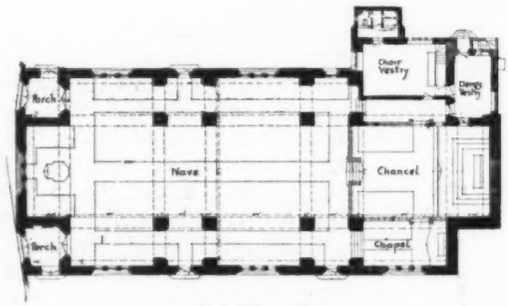
The most recent of these five churches is St. Paul's, Derby Lane, Liverpool. This affords an unusually striking example of bold, straightforward brick building which relies for its exceedingly graceful effect entirely upon the use of very simple materials, and strong, vigorous structural lines. Of applied ornament indeed there is very little, the ribs of the brick vaulting serving to give relief to the interior, in connection with exposed brickwork around the tall window openings and at pier angles. The plan is interesting. It consists of choir and nave with three transepts on either side and a large square tower rising above the intersection of the central transept with the main roof. This is very clearly expressed on the interior. It would indeed be difficult to conceive of a church which more fully showed its arrangement on the outside. Inside, an original effect is produced by the intersection of the transept vaulting with the main vault, resulting in the main arcade being composed of high and low arches alternately.

Externally the church is faced with small silvery gray bricks laid up in an appropriate bond; the unusual plan of the building makes possible broad wall surfaces which, particularly in a structure of brick, add a definite element of strength to the appearance of the building. The square tower rises to a height of about eighty feet and its roof, like the roofs of the entire church, is of tiles.

A very effective though extremely simple arrangement has been made of the grouping of the tall, narrow windows at the West end of the nave and in the several transepts. By placing them closely together, divided by piers or mullions of specially modeled brick and recessed slightly within the outer surface of the walls, a very interesting result has been obtained. Equally successful is the high wall of gray brick which encloses the ground about the church and the use of wooden gates in the arches from the street into the open porches. The interior of the church is consistently simple. The

walls are plastered and a high dado of wood, paneled and painted, runs about the walls. The aisles are paved with tiles, with wood blocks elsewhere, the use of a wood floor beneath benches or chairs being probably due to the fact that many people object to the coldness of tiles or stone. At the South side of the choir is a small chapel which is used for daily services and at the opposite side are arranged the choir room and the clergy sacristy over which extends an ample space for an organ chamber.

In the building of this church, which accommodates a congregation of about 640, quite obviously the controlling factor was cost. An imposing structure was required at a minimum of expense, and Mr. Scott has very successfully met the conditions, by adopting largeness of scale and simplicity and dignity of proportions rather than any elaboration of treatment. It is, perhaps, not over satirical to observe that whereas we never hear of the cheap hotel or railroad station, the cheap church is always confronting us. And the architect's task to provide it, effectively, is not easy. The available funds are almost always insufficient to do more than make possible the barest fabric, and though in later years all manner of enrichment may be added, not often does this follow a complete scheme, pre-conceived by the architect and in accordance with his own designs. He who pays the piper often calls the tune, and so we usually have the sight of an interior being successively ruined by "memorial" windows, organs and other features thrust upon the church by well meaning donors who are often wholly devoid of a sense of appropriateness or suitability.



Main Floor Plan

It has often been Mr. Scott's problem to design churches on this basis of minimum cost, and that his main reliance on structural lines and good proportion is right may be seen again in the church at Northfleet, at the mouth of the Thames. This church stands on high ground in the midst of a poor district, and its tower is a landmark for miles around. A very

View of West End, St. Paul's Church, Derby Lane, Liverpool

St. Paul's Church, Derby Lane, Liverpool

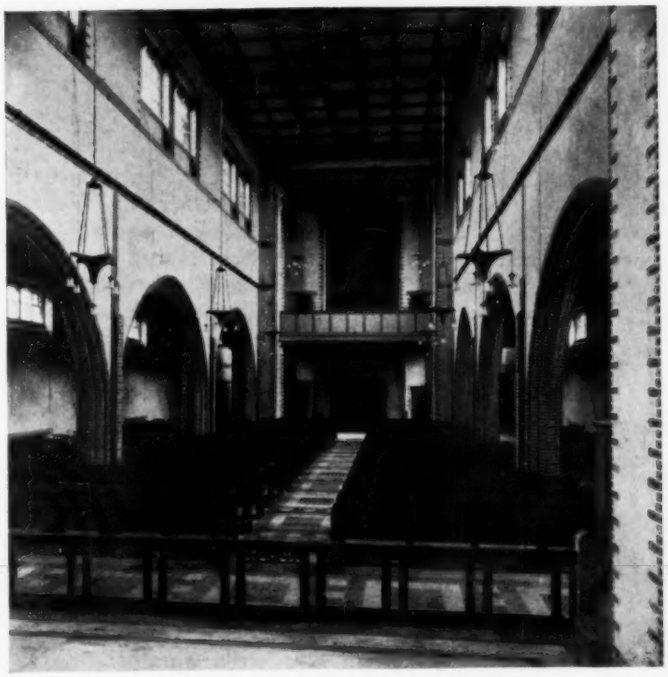
noble tower this, rising sheer from the pavement and maintaining its square form to the summit, where it has no crowning flèche, spire or cupola, but only a crenelated parapet. The outline is excellent, the slight breaking back of the succeeding stages giving all the relief that is needed, while the high, narrow belfry opening on the Western face produces a shadow depth that is extremely effective. The nave walls are carried high and the interior is ceiled straight across. Reinforced concrete beams are used here, as often in Mr. Scott's churches, frankly as modern construction. The fabric is of two-inch Crowborough bricks, plastered internally; the sanctuary roof is decorated in black and white on a red and gray ground, and the nave and aisle roofs, organ gallery front and other interior woodwork is finished in two shades of gray. This is a Catholic church, providing accommodation for about 380 worshipers. The accompanying view of the interior looking West shows the organ gallery across the end of the nave. The placing of organs at the West end is an old practice and much happier in effect than putting them in transepts or, —worst of all possible schemes,—setting them straight in front of the congregation, where the collection of metal pipes provides a conspicuous opportunity for strange and wonderful displays of stenciled decoration.

Two other Catholic churches by Mr. Scott are those at Ramsey, Isle of Man, and at Sheringham, Norfolk, each of these having a presbytery attached to the church. The Sheringham plan is very unusual, the church itself being L shaped, the nave occupying one arm, and a transept the other, the sanctuary coming, of course, at the junction of the two. The presbytery is connected with the transept and incorporates the sacristy accommodations. The nave is very high and narrow, the simple king post construction of the roof showing inside and being decorated with color. The focus of the interior is, however, the high reredos, which consists of a magnificently embellished frame around seven devotional panels of figure subjects, four of them being copied from an old Norfolk screen. The sanctuary has a black and white marble floor; the altar and retable are also of marble. Hanging from the roof and dividing the sanctuary from the nave is a richly carved Rood, colored and gilded, made

ALTAR OF CATHOLIC CHURCH, RAMSEY, ISLE OF MAN

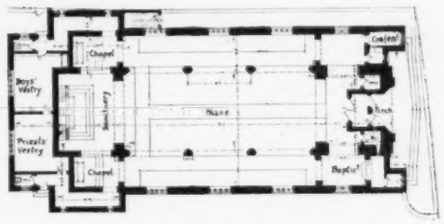
ALTAR OF ST. MARY'S CHURCH, DOUGLAS, ISLE OF MAN

FROM DESIGNS BY GILBERT SCOTT, A.R.A., ARCHITECT



Nave of Catholic Church, Northfleet, Kent

The church stands by the sea, on a site as romantic as that of Whitby or Iona. Being in a very exposed position, its walls are made extra strong and hollow, the outer thickness of wall being of rubble obtained from old buildings on the site, the inner thickness of smooth local bricks, which have been lime whited only, not plastered. The effect is that of truly monastic simplicity redeemed by the rare beauty of the structural proportions. The triptych in this church is a particularly good example of the architect's work in detail,—a modern version of flamboyant Gothic, full of vitality and rich fancy.

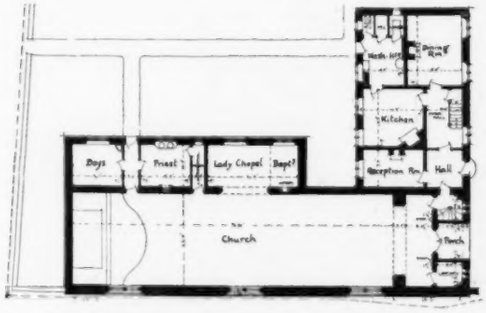


Main Floor Plan

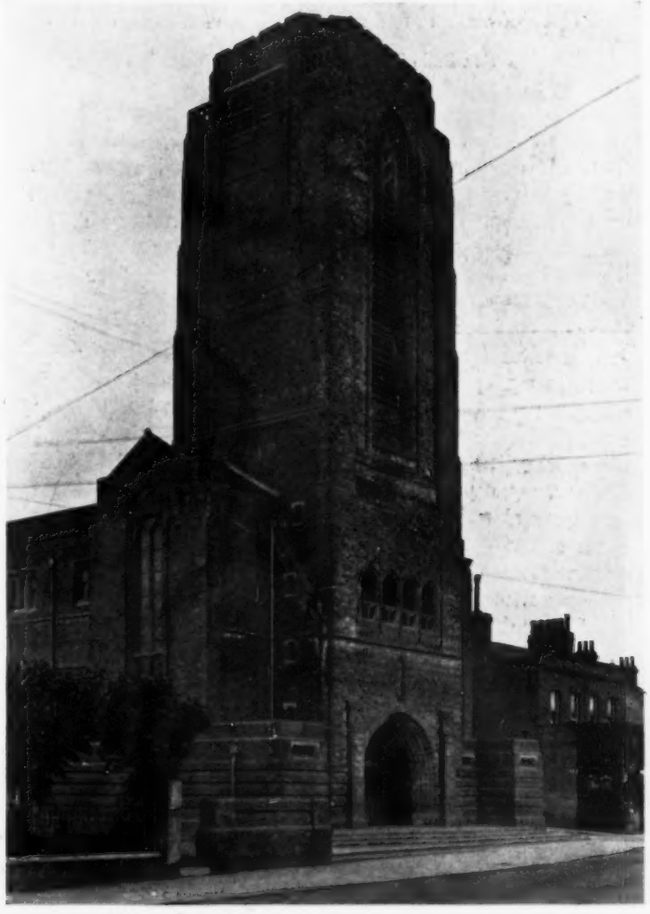
in the Tyrol by the clever craftsmen in wood of that district.

The interior of this little Norfolk church may well be regarded as one of the most beautiful among modern English work. It possesses much of the reticence and simplicity which have made the English country church, during many centuries, the model upon which church architects everywhere base their efforts.

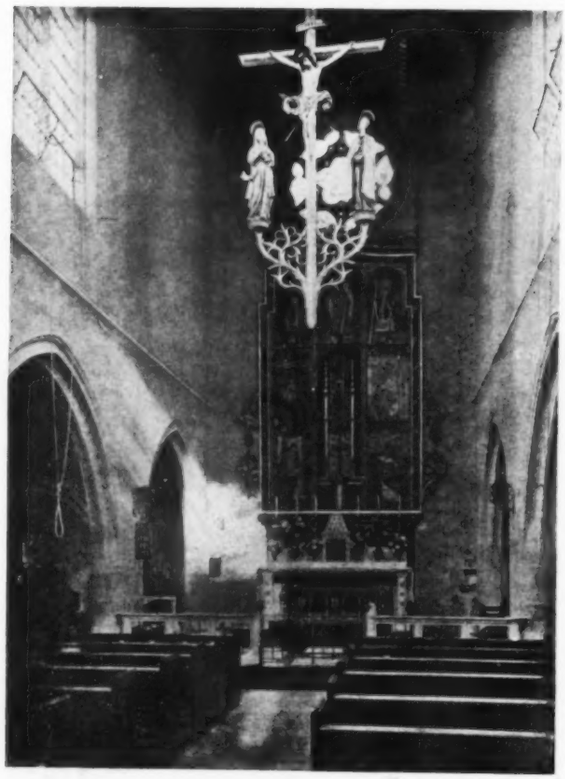
The other church with presbytery attached, at Ramsey, consists of a long nave and sanctuary, a plan with which Mr. Scott is unusually successful. There are no aisles and no transepts. Everything is severely plain and simple, but here again, as in all Mr. Scott's Catholic churches, color and gilt enrichment around the altar, on the tie beams and in the Stations of the Cross, produce a strong effect and redeem the interior of any feeling of bareness.



Plan of Church at Ramsey, Isle of Man



Tower on West End, Catholic Church, Northfleet, Kent

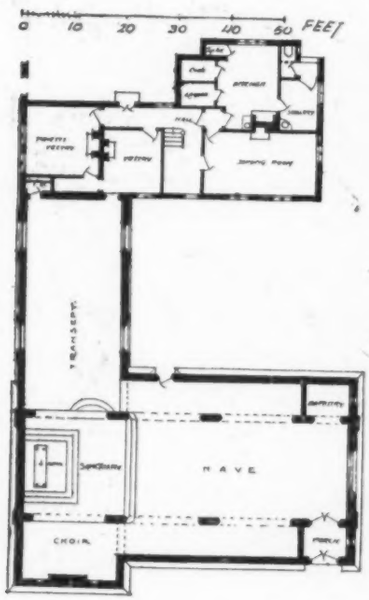


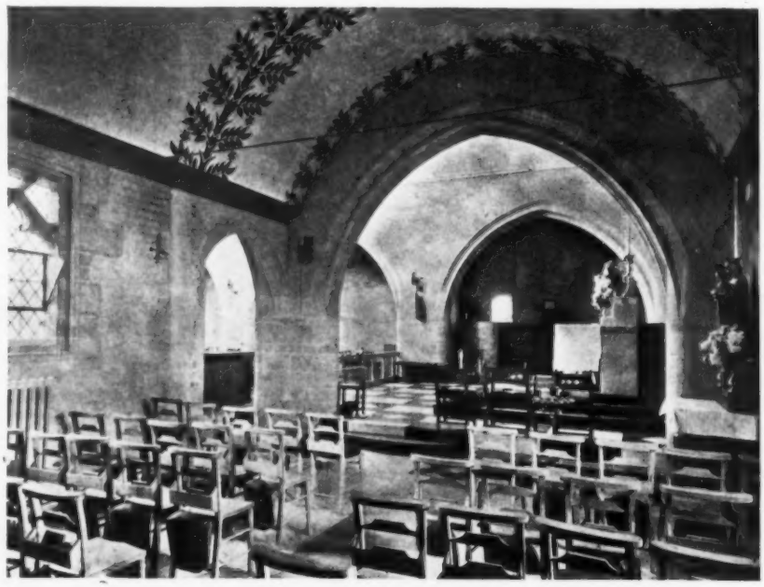
East End of St. Nicholas Church

Another interesting treatment of sanctuary accessories is in St. Mary's Church, Douglas, Isle of Man. Here again the space above the altar is occupied by a triptych, carved, colored and gilded. At the top the ornament takes the form of a "Jesse Tree," a subject frequently worked out in stained glass and sometimes in sculpture. The Jesse Tree portrays the royal lineage of Christ; at the bottom King Jesse is shown and the tree growing from his loins bears many royal figures wearing crowns and bearing scepters, the full flowering of the tree being shown as the Mother and Child at the top of the entwining branches.

While referring to this matter of enrichment it may be interesting to know that Mr. Scott's practice is always to design the details himself. We see in old churches marvelous craftsmanship in wood and stone, we admire the individual touch of the workman, the inequalities in the setting out, the running of the ornament as the spirit moved and not in mechanical repetition of an exact copy. And we may conjure up a picture of a similar thing being done today by the ordinary carver or decorator. But, though there are not lacking craftsmen who could be trusted thus to work out their own designs, disaster would surely follow the giving of such freedom into the workman's hands. In execution his work may be admirable, but he has no tradition of good design behind him as the older men had, and in face of this fact it is best to provide him with full sized details. This is Mr. Scott's custom and the enrichment thus produced has an orderly, definite and logical effect in harmony with the architectural design. In the Golden Age of Art it would of course have been all very different but it is best to frankly acknowledge the conditions which surround us, and to allow the architect to design the enrichment for his own buildings.

A church, more than a building of almost any other character, should be a consistent and finished work of art and such it never can be unless carried out to complete the scheme as it exists in the mind of the architect who has studied and planned it, complete with all its details of structure and ornament.





Floor Plan and Transept Detail, St. Nicholas Church, Sheringham, Norfolk

St. James' Chapel, Cathedral of St. John the Divine

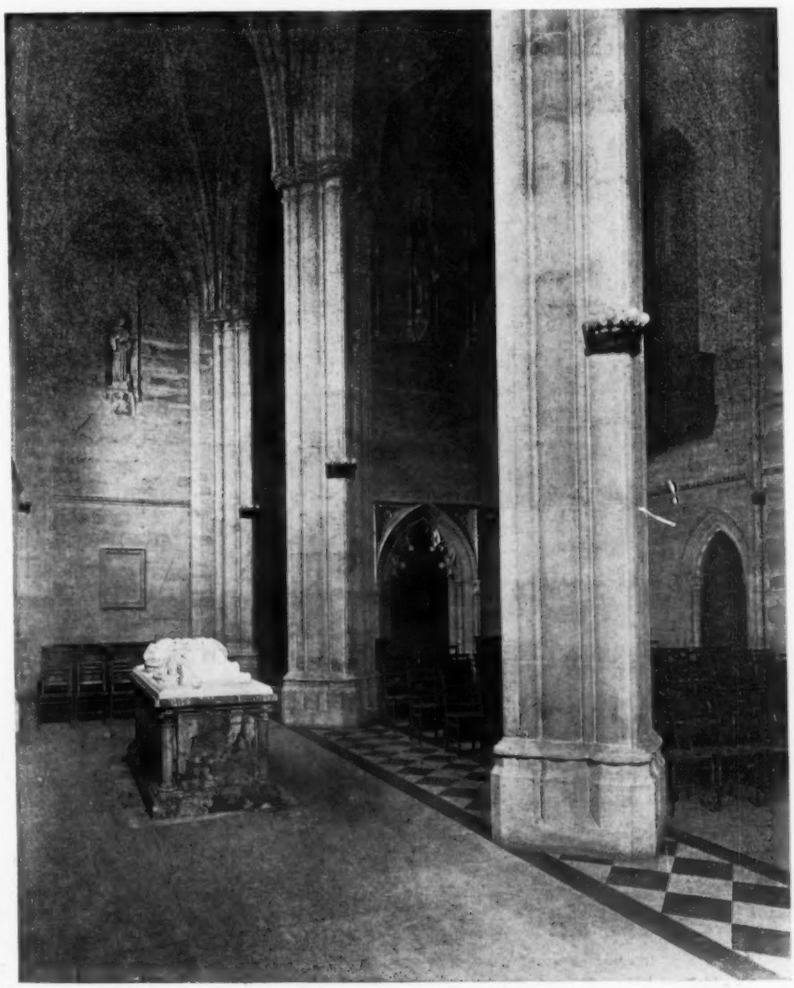
HENRY VAUGHAN, ARCHITECT

SLOW but steady progress on the Cathedral of St. John the Divine marks the passing of the years and already there are certain parts of the vast pile of buildings which have attained what will be their completed form. No part of the Cathedral has thus far been more successful than the seven small chapels,—the "Chapels of the Tongues,"—which surround the choir and sanctuary, each of which has been the gift of some individual or of some one family. To each donor belonged the privilege of selecting the architect for the particular chapel in question, the designs and plans being made subject to the approval of the architect to whom belonged jurisdiction over the entire Cathedral and all of its auxiliary buildings.

The Chapel of St. James, the gift of the widow of the late Bishop Henry C. Potter and her children, is by far the largest of these seven chapels and occupies a space at one corner of the Cathedral where the South transept crosses the nave. This position affords access into the transept and also into the wide ambulatory which extends around the choir and sanctuary and from which all the seven chapels are entered.

The architect of St. James' Chapel, the late Henry Vaughan, has well utilized the small space at his disposal and has created a work of great architectural dignity and of a well restrained character which is in thorough accord with its highly architectural surroundings. Owing to the small area of the Chapel Mr. Vaughan very wisely emphasized its height, with three richly traceried windows filling the three bays of the wide aisle which the peculiar position of the Chapel made possible. Balancing the bay nearest the altar the space which opens into the ambulatory gives something of the effect of a transept which materially increases the width at this point.

St. James' Chapel is now complete excepting for the stained glass which is to fill the three large windows. Like other parts of the Cathedral the walls are of stone, the floor of marble and the roof is vaulted. It is the only chapel of the seven to include a small but well appointed choir and it has its own organ, set within a chamber in the thickness of the wall and high above the floor near the West end of the Chapel. Above the altar is placed a richly carved reredos with canopies above a sculptured portrayal of the Transfiguration and tall statues of the Evangelists with their appropriate emblems. At either side of the reredos are smaller statues in niches representing St. Augustine of Canterbury and St. Gregory the Great while further above and at either side of the stained glass window are statues of St. Peter and St. Paul. In the front of the mensa, or altar table, is placed a sculptured representation of the Last Supper. In the wide aisle of St. James' Chapel is placed the tomb of the Bishop, the recumbent effigy showing him vested in the robes of his episcopal office.



Tomb of Bishop Potter in Aisle of Chapel

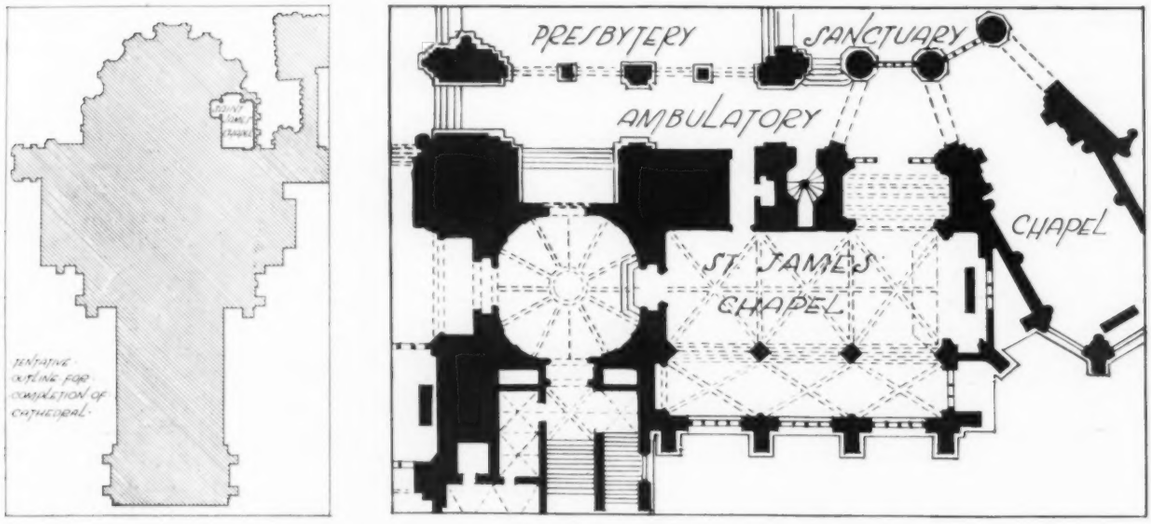
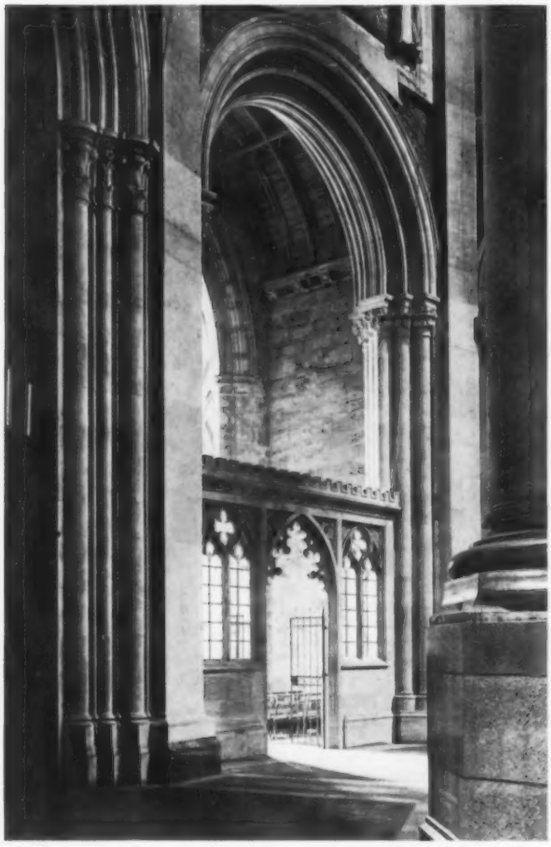


Diagram of Location in Cathedral and Detailed Floor Plan of Chapel

Most of Mr. Vaughan's churches include very carefully designed details of structural ornament and very interesting furnishings and fittings. In addition to such decorative details of St. James' Chapel as have already been mentioned there are important accessories in the carved stone screen which separates the Chapel from the choir ambulatory and various niches in which statues are placed under Gothic canopies. A very interesting example of this treatment occurs above the door leading from the end of the Chapel into the close where three niches and statues are grouped together. Some very successful details of wood carving are the ends of choir stalls, the lecturn and the case for the organ with the tiny gallery for the organist.



Screen at Ambulatory Entrance to Chapel

These various small chapels which cluster about the choir and sanctuary of the Cathedral have been planned for the holding of services of the Episcopal church in various languages which accounts for their being called the "Chapels of the Tongues." The dedications of the chapels may be regarded, to a great extent, as suggesting the languages used in the services therein; German is obviously the tongue suitable for the Chapel of St. Boniface, French for that of St. Martin of Tours, Italian for St. Francis, while Spanish might be the language employed in St. James' Chapel. The decorative accessories in these chapels relate, in each instance, to their dedications. Such details as sculptured adornment, stained glass and screens or grilles of metal have been planned to embody symbolism of an appropriate kind.

Rich opportunities have been offered in these small chapels for the successful use of glass. In each instance a considerable part of the walls is made up of large windows and the great openings have made possible the use of small medallions which in many instances show scenes in the lives of the saints to whom the chapels are dedicated.

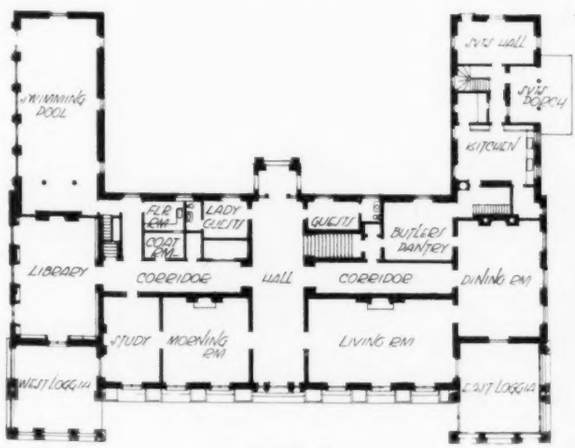
The exterior appearance of these various minor chapels is especially interesting, for they are all very slightly different and their comparatively moderate dimensions tend to emphasize the great height of the body of the Cathedral which towers above.

A House at Mount Kisco, N. Y.

THE RESIDENCE OF EUGENE MEYER, ESQ.

CHARLES A. PLATT, ARCHITECT

TO Charles A. Platt is in large measure due the credit for the very great stimulus that has brought American country house architecture to the high standard it holds today and to him are directly attributable some of the most stately and beautiful homes in America, which with their garden settings rank with English country places that for many years have been recognized as the finest expression of domestic architecture. Mr. Platt enjoys the distinction of having been a painter and etcher before he began the practice of architecture. He is endowed with the powers of the artist as well as the architect, and it is therefore not strange to find his architectural works characterized by a careful regard for line, subtle color and charming relations between setting and structure. He entered upon his work as a designer of houses at the time interest in country living began to assert itself as an American quality and his early houses which were designed with a fresh memory of previous study of Italian gardens and villas, established a standard which has exerted a marked influence on domestic architecture. In all of the many houses he has designed there is a consistent element of fitness to site and a remarkable measure of restraint in the use of architectural motifs and decoration. These



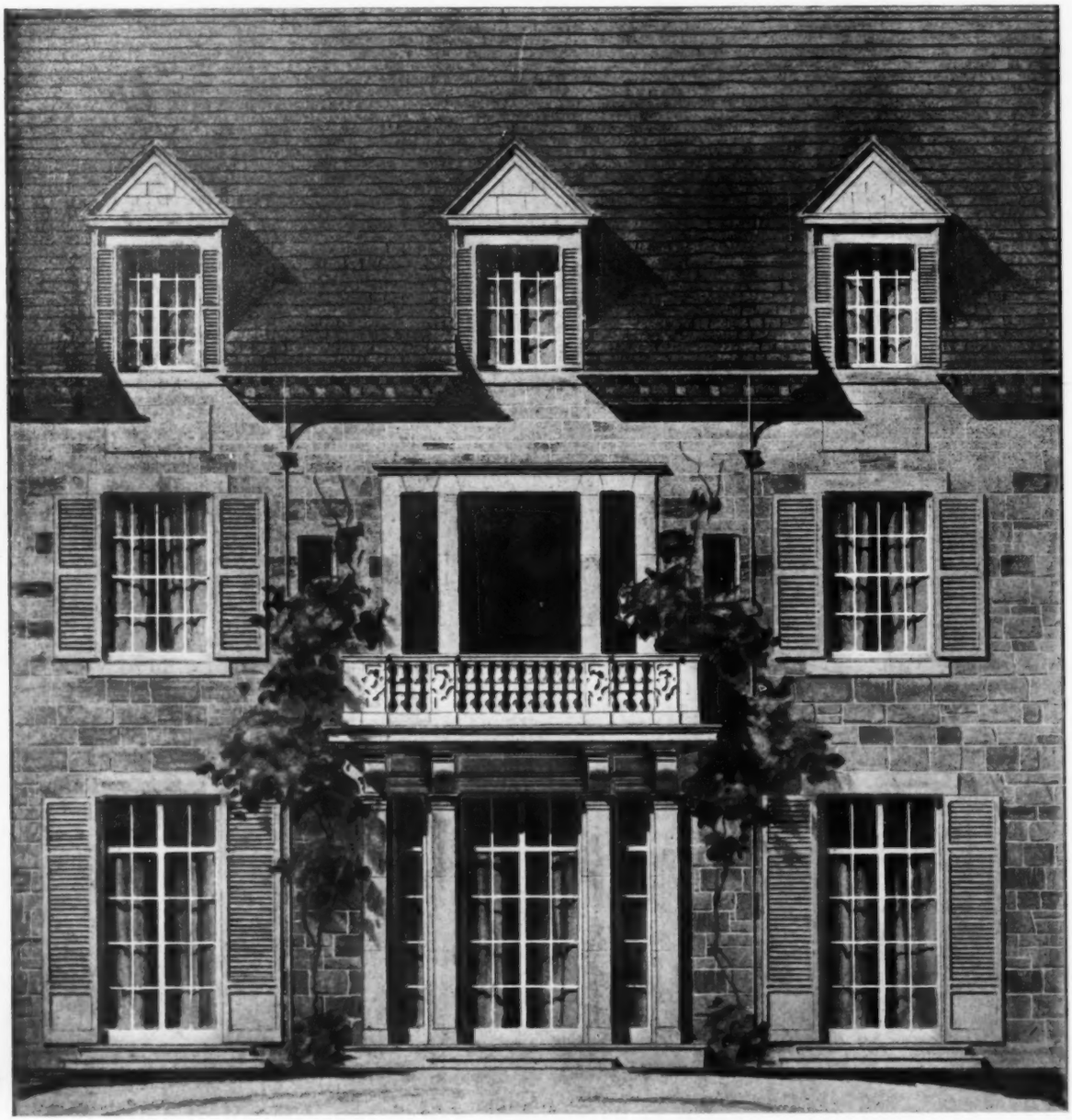
First Floor Plan

Second Floor Plan

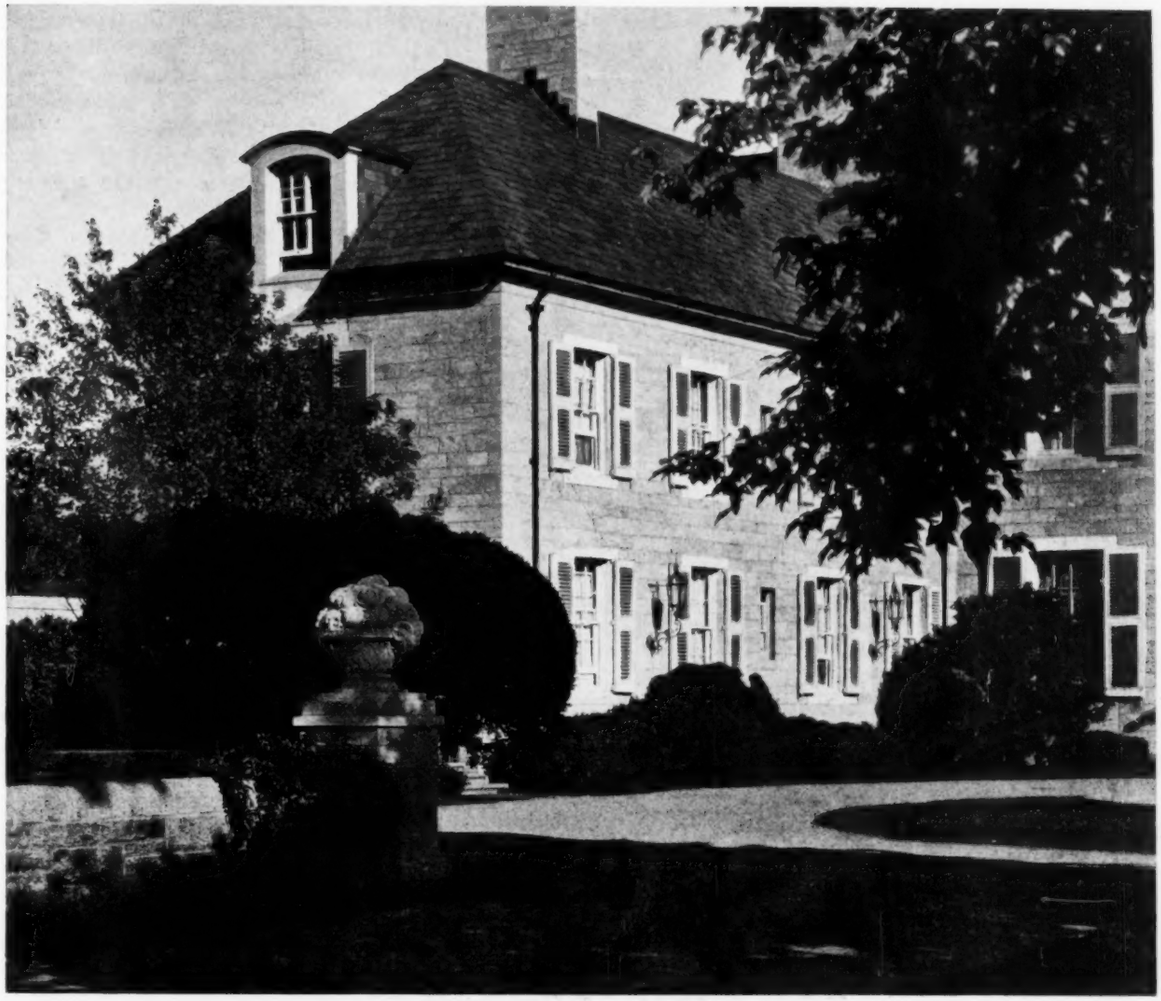
houses while in most cases composed on a large scale have in them a great simplicity and homelike character. They are always formal, but their symmetry is never dull, it is tempered by a perfect understanding of the art of fitting the building into its surroundings, and by a sure handling of the color and texture of materials. His designs are perhaps of the greatest interest in their proportions and beauty of line; this is accomplished not through applied decoration but by the most honest and straightforward expression of form.

In the house for Eugene Meyer, Esq., at Mount Kisco there is seen a recent example of Mr. Platt's work which is quite distinctly different from his other houses. It has the breadth and distinction of the Italian which underlies all of his work—there is, however, little that can be definitely labeled as Italian—one feels perhaps a stronger suggestion of French inspiration; it is truly derived from no single precedent, being rather the product of intelligent eclecticism which insures a quality of refinement because of the background provided by the appreciation of all that is good in architecture.

The planning of this house presented a most interesting architectural problem. The site is on very high ground overlooking a wide expanse of woodland, the fall being very abrupt from the terrace to the south of the house. The comparatively



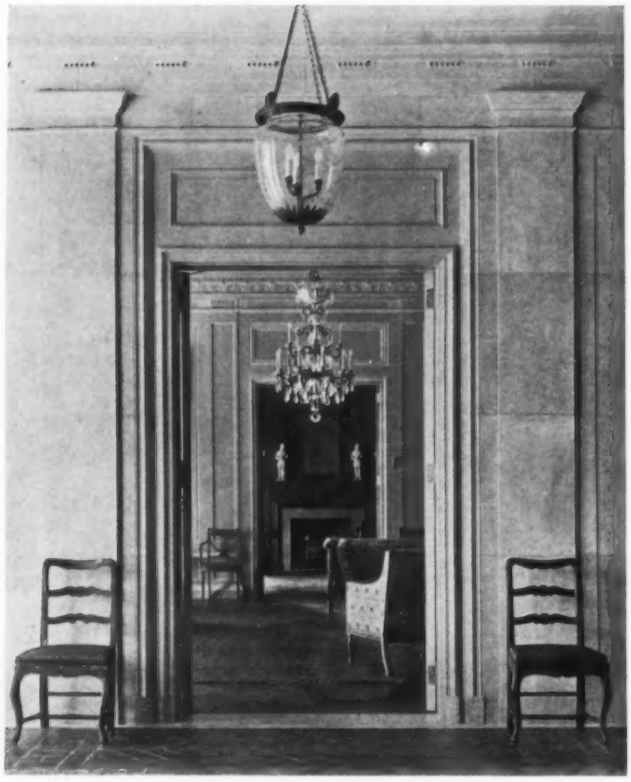
Charcoal Study of Central Motif on Terrace Façade



CORNER OF FORECOURT AND SERVICE WING

NORTH OR COURT ELEVATION

HOUSE OF EUGENE MEYER, ESQ., MOUNT KISCO, N. Y. CHARLES A. PLATT, ARCHITECT



Hall Doorway to Morning Room

level area for the house, garden and approach was limited and an examination of the plot plan on Plate 50 will show how ingeniously this has been utilized to provide the essential features of a country place.

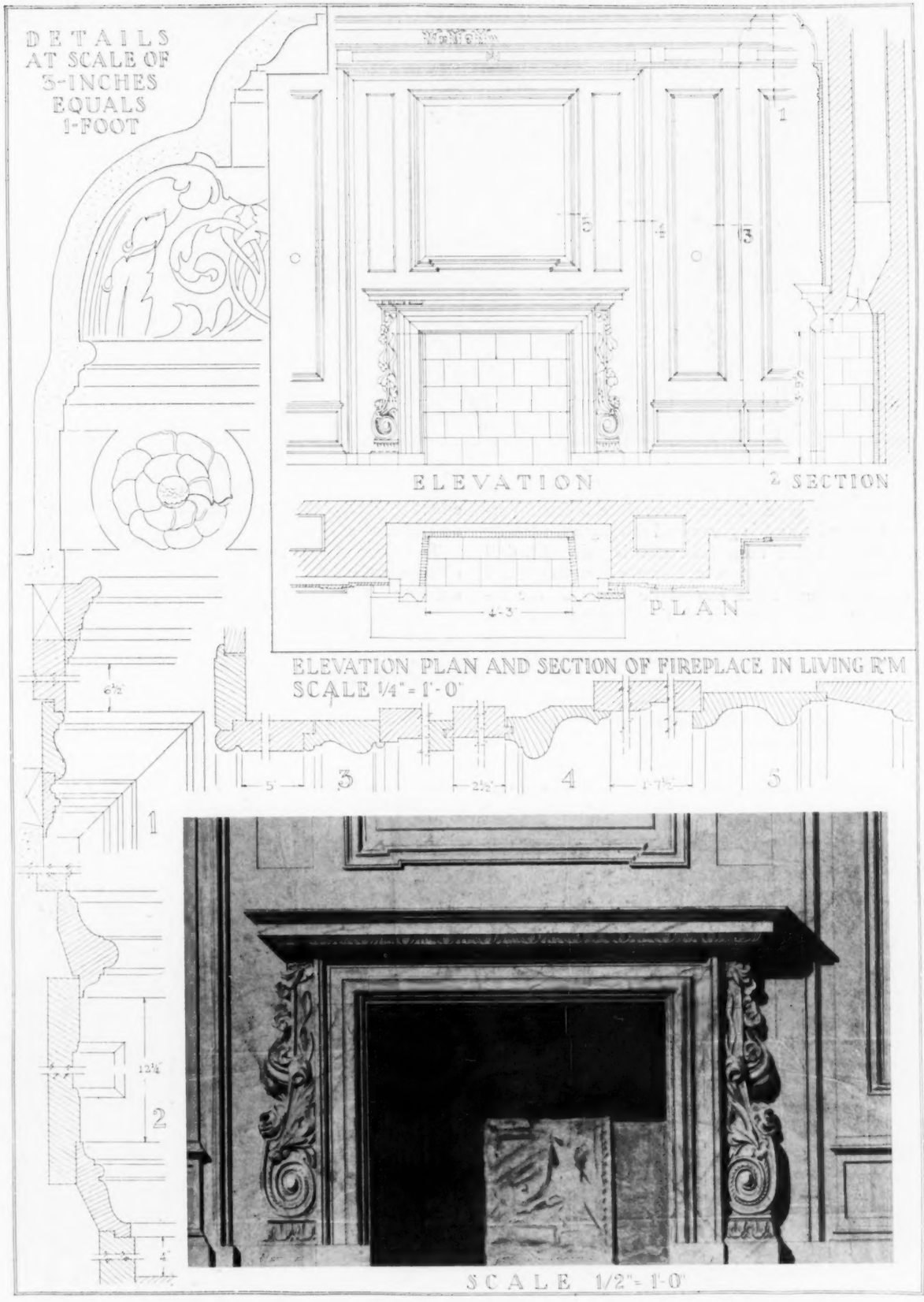
The approach to the house is from the north. A gently rising and curving roadway leads to a low walled forecourt approximately 100 feet square, the grade of which is but a step or two below the main floor level. The low and irregular planting of box along the base of the walls, the great breadth of the façade and the low-roofed wings on either side make a charming ensemble. There is nothing to detract from the simple dignity of the beautifully balanced disposition of windows and wall spaces, the entrance doorway bearing the only note of accent save the artistically wrought lamps that hang out from the forecourt walls of the two wings.

The south side of the house has been located on the very edge of the slope so that all the available level space is given to the garden at the right of the forecourt. This has considerable area and is treated in a simple, open manner to increase the apparent size. The main axis runs north and south terminating at the northern end with an orangery and the wooded slope at the south. The cross axis is the same as that of the forecourt. Access to the garden from the house is through the library windows, which open on to long, low steps.

The land falls away at the east again which made it possible to arrange some of the service features in the basement, and a branch from the main drive leads to the service court at the basement level. The grade about the opposite wing is only a foot or two below the floor level. The swimming pool which occupies the lower portion of this wing is lighted by a row of windows opening to the floor and about nine feet high. These windows overlook the garden and the great expanse of glass gives the pool practically the effect of an outdoor location.

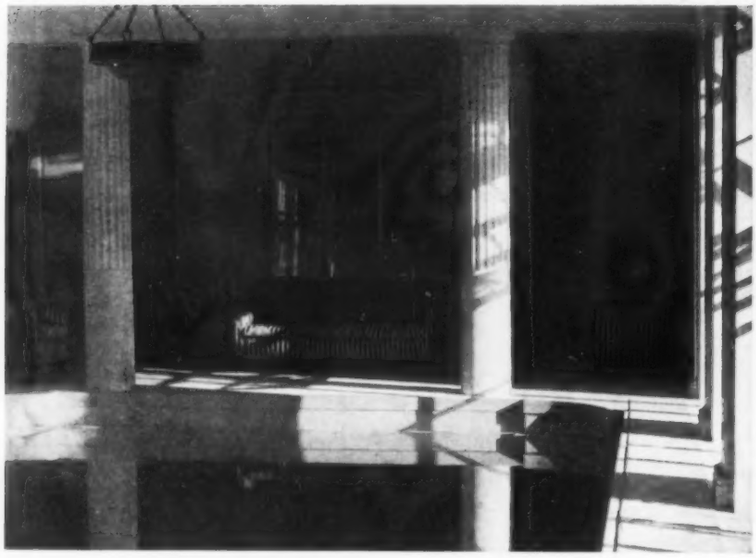
The exterior walls of the house are built of local granite that was quarried on the property, most of it coming out of the site of the house. It is a warm gray with considerable variation in graining and in tone. The stones are sawed square and vary slightly in size; they are laid in the wall in random-coursed ashlar. The cut stone cornices, columns and window trim are

Morning Room toward Living Room



DETAILS OF LIVING ROOM, HOUSE OF EUGENE MEYER, ESQ., MOUNT KISCO, N. Y.

CHARLES A. PLATT, ARCHITECT



Detail of Swimming Pool

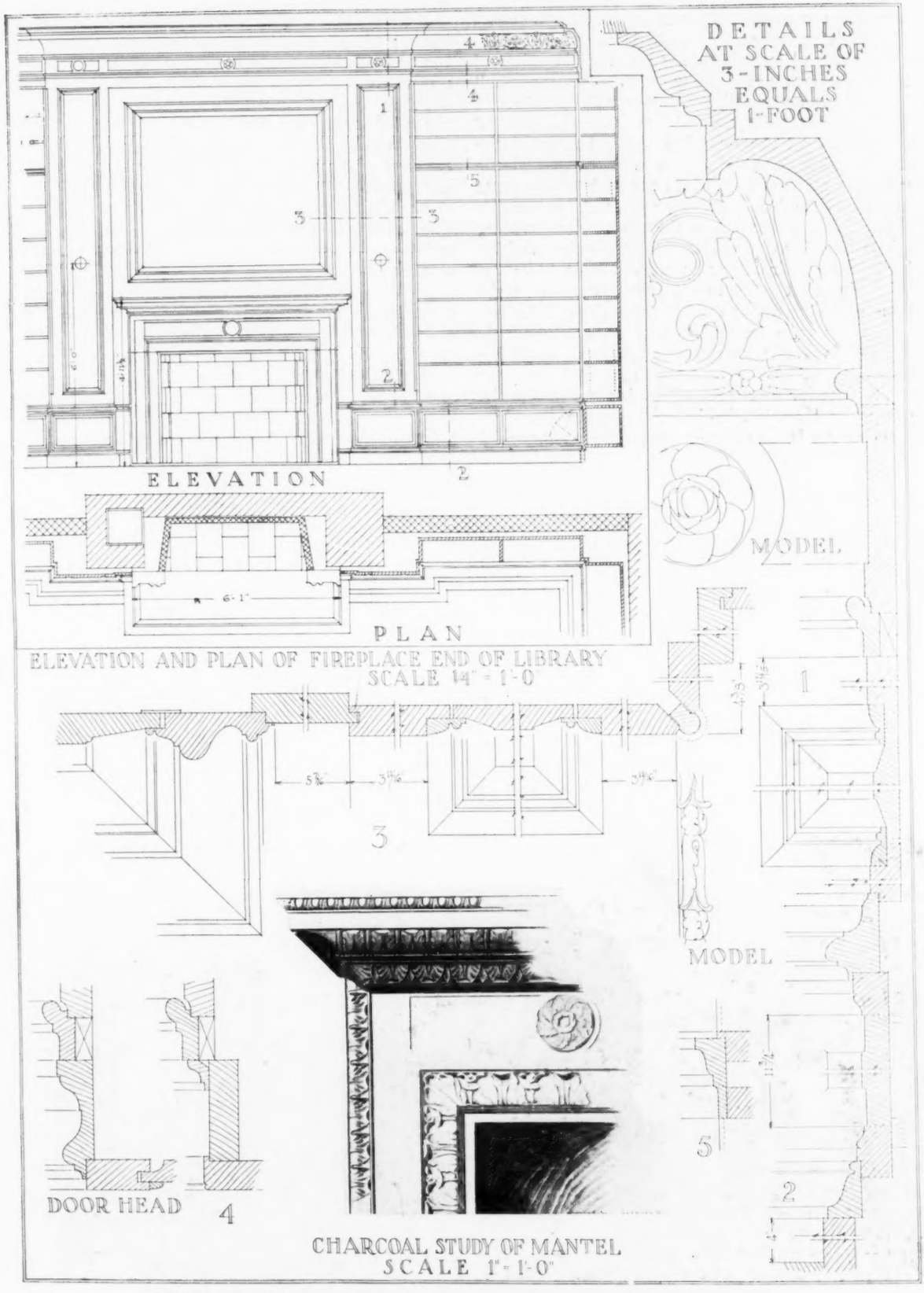
Indiana limestone. The roofing slate is from Vermont quarries and is green and dark gray, varying in color and thickness. The sash is painted a dull white and the shutters a warm gray; the metal work is green. Note should be made of the inconspicuous appearance of the leaders and rain water heads. The frequency with which the eaves are broken by dormers necessitated a large number of leaders; the vertical lines made by them on the façade have been kept narrow so that the continuity of the long horizontal lines is not interrupted.

Although the plan of the house is U shaped, it presents an appearance of a long building of simple mass from whatever point it is viewed. The wings which form the forecourt are kept low and the long dominant main roof line rises above them, emphasizing the main mass of the house which is some 143 feet long. The large scale of the main block can be appreciated by noting that the wings contain three stories in less than the height occupied by two in the main portion.

The care with which the architect considers scale is illustrated by the loggias at the ends of the south front. The openings are about 14 feet high which accord well in scale with the house as viewed from the exterior. From the loggia itself these openings appeared too high and a wrought iron grille of pleasing curves was arranged in the upper portion which effectively adjusted the relation between exterior and interior scale.

The arrangement of the floor plan is simple and direct—a wide central hallway unbroken by stairs extends through the house to the terrace. Corridors at right angles to the right and left bring the rooms in the wings into easy communication with those in the central portion. The entire north side of the house is taken up with service quarters, so that all the main rooms are so placed that they have sunny exposures and a command of the distant views. A pipe organ is a feature of the house; the tone chamber is in the space adjoining the ladies' coat room on the first floor with an opening into the

Orangery and Formal Garden



DETAILS OF LIBRARY, HOUSE OF EUGENE MEYER, ESQ., MOUNT KISCO, N. Y.
CHARLES A. PLATT, ARCHITECT

corridor, the console is placed against the east wall of the living room.

The second floor is chiefly arranged in suites of bedroom, bath and sleeping porch. The upper hall is specially noteworthy for its carefully balanced treatment and its general spaciousness. Maids' rooms occupy the second and third floors of the service wing. Guests' rooms are arranged in the central portion of the third floor with a play room at one side and a lounging room at the other.

In the basement below the terrace is a bowling alley reached from a vaulted hall, the stairs to which lead from the first floor near the library. The service wing in the basement is taken up with the laundry and general service quarters and sleeping rooms for men servants. The heating plant is located in the center portion below the living room.

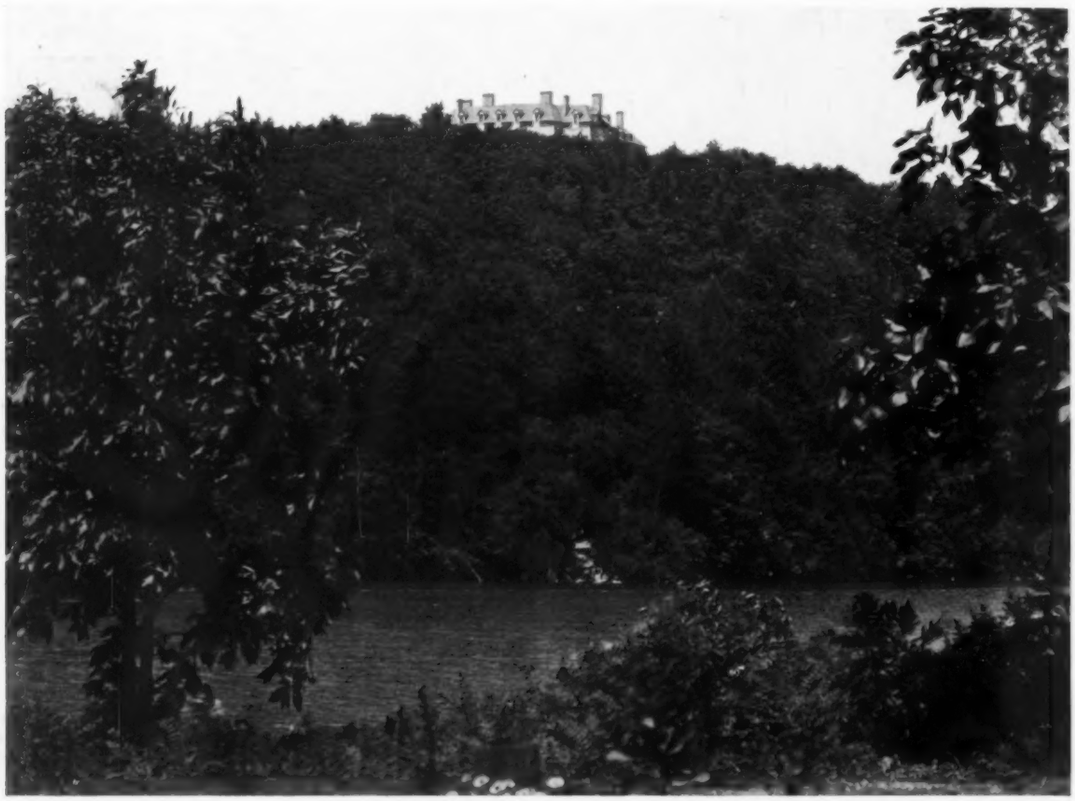
The interior treatment of the house exhibits the sympathy Mr. Platt holds for the ordered development of the Italian renaissance. The same careful regard for proportion and restraint in the use of ornament that is characteristic of his exteriors is equally evident in his interiors. The largest and most imposing room is composed of simple elements; nothing is introduced that would impair the sense of refinement and homelikeness which pervade all his interiors.

The walls of the entrance hall and the staircase are of Indiana limestone, the surface of which is honed; the floors are of special hand-made tile, waxed and polished. The living room is a large apartment simply treated with broad plaster panels with low wooden wainscot and wooden mouldings, the color of which is warm gray. The wall decorations in this room as well as in the morning room are beautiful Chinese paintings, the wall color or background being complimentary to the paintings.

The dining room is carried out entirely in marble. The walls are of deep Istrian marble with honed surface and the floor is paved with alternate squares of black Belgian and Istrian marble. The mantel is an Italian antique of vigorous design and dark brown from age and discoloration.

The library walls are low toned English oak with book shelves covering a large part of the surface. The mantel is of kingwood stone.

The details and office sketches reproduced herewith are of special interest in showing the way in which design is studied in Mr. Platt's office. Ornament and mouldings are studied in large scale charcoal rendered drawings which give an effect approximating modeling. In addition actual models are made and submitted for criticism of all carving on mantels and ceilings. In many cases these models include the mouldings of adjacent wall panels so the finished effect of the combined details may be readily determined in advance.



View of House from the Valley

Interior Woodwork

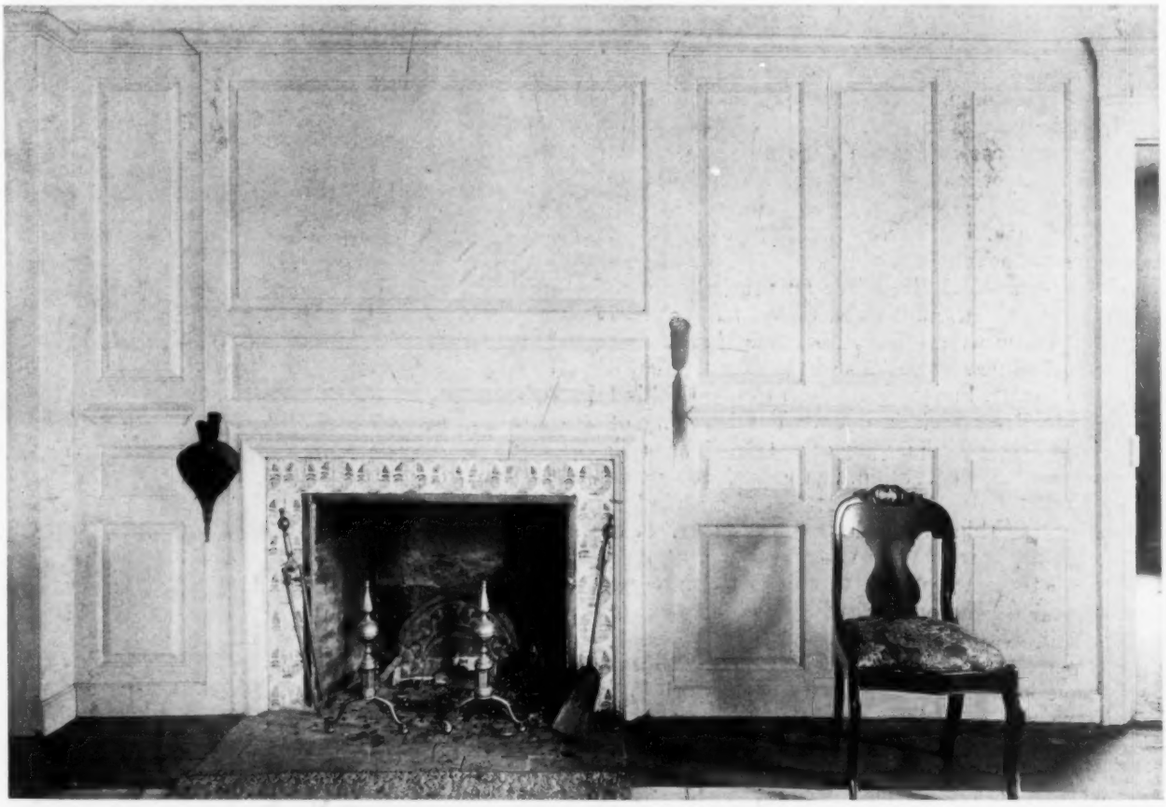
THE DEVELOPMENT OF THE NORTHERN VERSION OF THE COLONIAL

By RICHARD B. DERBY

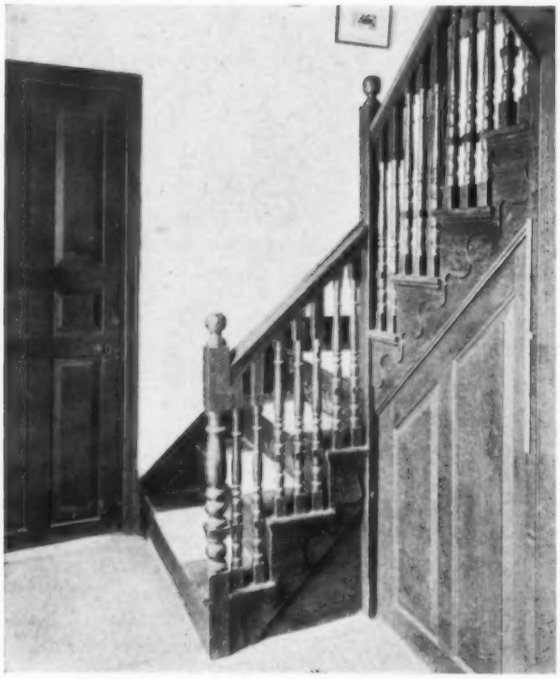
WE usually distinguish the several stages of our Northern work by marking it off into periods as the Gothic, the Georgian, the Roman, the Greek, etc., or as the first period, the second period, the third period; but our period divisioning is arbitrary at best and merely serves, like railroad stations, to note the direction in which we have been traveling. It is desirable, if only for the sake of variety, to look at our architectural development from another point of view. It is even possible that the new point of view may be fundamentally better than the old. Certainly it is better to recognize the various changes at briefer intervals than those marked by the so-called periods, and to do so it is only necessary to think of them in terms of construction instead of in terms of style as is commonly done. Inside finish, whether taken as a whole or in parts, notes this progress of development by many and intimate steps which relate themselves (at any rate in the earlier work), almost more intimately to the changing types of construction than to the changing styles.

The construction of our houses from the Gothic period to 1800 varied from time to time in almost all particulars, but there is one time, which can be more or less clearly stated, at which it ceased to be definitely one kind of construction and became definitely another kind. The first was of a kind either wholly or partly exposed to view; the second was of a kind wholly concealed. The first originated with our earliest houses and continued until the modern method had standardized all the members. Our first walls were posts, girts, girders, etc., with merely a filling between. Modern walls are a collection of studs reinforced at the corners. This, of course, omits from consideration brick and stone structures.

Finish applied to the early construction may properly be called native. It was even a kind of opportunist's finish in which the workman took advantage of this or that accident, or allowed himself to be forced in this or that direction by conditions. The bulk of the finish in the early houses was little more than the construction itself. When more finish than the mere construction was needed, the carpenter took occasion to give his special imprint



Room in the Hannah Robinson House, Saunderstown, R. I. Built about 1750



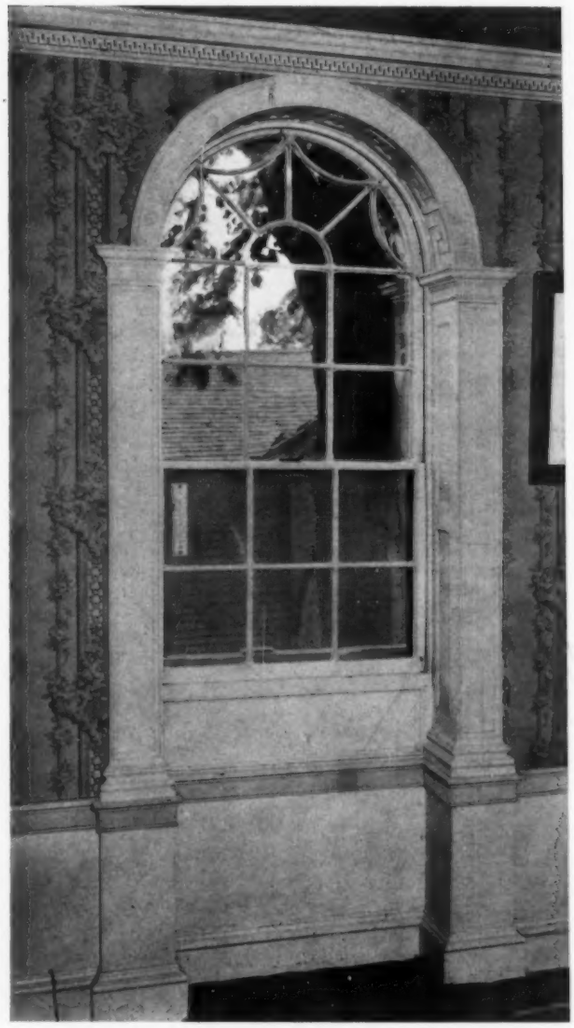
Stairway, Hancock-Clark House, Lexington, Mass.

to the parts he himself supplied. There was, of course, a general tendency of direction which was adhered to by everyone, but there was ample opportunity for the individual workman to apply his own ideas without any interference with this. As a result, we have in this earlier work a finish which supplements, while adapting itself to, the construction and is at once the expression of common general ideas, and of the ideas of the workman.

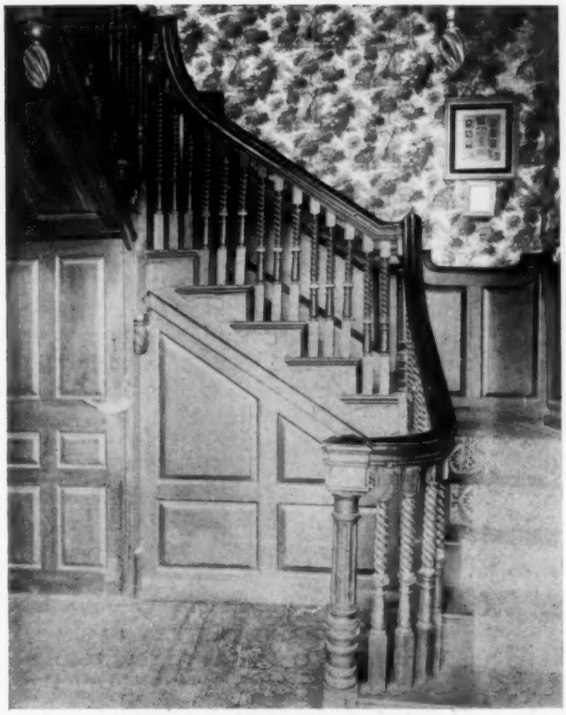
The characteristics of this work are those of an unsophisticated art. Chief among these are freshness and virility. The interest attaching to this work is not due to fine relations of mass or to refined proportion of parts. It is rather an interest due to qualities of charm, quaintness, flavor, naïveté, and the like. When we go into one of the old rooms we expect to find new variations of the characteristics which we already know. We expect to find the kind of individuality which is due to the handling of parts rather than the handling of a style. The style was imposed by construction, methods of workmanship and materials. It was not less of a style because of these things. Perhaps it was more of a style. Certainly it was more indigenous. But over and above the interest due to this is the interest due to accident and opportunity, taken advantage of by the individual workman.

It is perhaps hazardous to give an exact date to the time at which the unsophisticated workman gave place to the designer. The general practice probably began about the middle of the eighteenth century. But the line of demarcation between the two kinds of work, even though it cannot be given a definite year, is clearly enough perceivable in the work itself. It is, of course, at that period when the old construction passed completely over into the modern construction. At this time inside finish ceased to be the complement of construction and became an applied product. The wall beam, whether cased or not, disappeared within the wall or floor of the house, and the cornice which was nothing but a cornice took its place. The corner post likewise disappeared. The door frame became purely a door frame and was no longer a part of the architrave. The minor ceiling beams, originally exposed, passed through the stage of being concealed above plaster; and then the summer or main beams underwent the same change, until the plain ceiling only remained. When the construction had thus been entirely reduced to its modern equivalent, walls and ceiling alike became an open page on which the new designers were to write.

The new designer began his work with the study of the classic. His first attempts were rather unfortunate from the domestic point of view. He was too much in the position of the man who loves art



Stairway Window, Pierce-Nichols House, Salem, Mass.



Stairway in the Hannah Robinson House

for its own sake and who doesn't realize that the only right use of his knowledge comes at about the time he is able to forget that he has it. His first work was cold, formal, precise, heavy and barren. He was no doubt in sympathy with his art, but he was not, as artist, sufficiently humanized to be in sympathy with the use to which it was put. His rooms were unhomelike and pretentious; but he worked with a formidable and increasing knowledge.

The new American classicists started their career with a study of the orders; not the orders as taught today, perhaps, when they are put before the student in such a way as to serve as a comprehensive background for architecture in general. Now we are taught all the variations which the several nationalities using them gave to all the orders. But our first students gave their attention almost exclusively to what might be called Roman work; and what they attended to as students they applied later (or simultaneously) as designers. Consequently we have in this early period of genuine design, a style of finish which partakes so strongly of Roman influence that it is not unreasonable to call it the Roman style.

The old construction having been superseded by the new, the designers had now a clear track for the application of their new finish. There were no embarrassing eccentricities of plan, no beams to be worked in as members of a cornice; no interrupted corners. Their only limitations were the sizes of rooms and the door and window openings. The size of a room was indeed a handicap and, judged by the early failures to design homelike interiors, it must have been insurmountable. Their task was to adapt their ponderous and formal prototypes, appropriate enough to the life of classic Rome, to the intimate and friendly use of the colonies.

The general effort simmered down to the particular attempt to make the order fit a room. This, the order, was what the designers chiefly worked with. They spread it, literally, around the room. The pedestal, instead of being a vertical motive, basing a column or a pilaster, became a horizontal motive, a dado, to be measured by the yard,—this in addition to its occasional use as a pedestal. The columns and pilasters, taken from massive rotunda or portico, were arcaded on the walls, at the corners of the room and on either side of the fireplace. The original powerful entablature was as powerfully employed as possible, the cornice given full scope, the frieze and architrave abbreviated to do duty, and

Stairway in the George Cabot House, Beverly, Mass. Built 1783

Stairway in Present Day House at Newcastle, N. H.
Little & Brown, Architects

echo their source, above the shaft. This is, perhaps, to satirize the new movement a little. Certainly the weight of the prototype persisted in the adaptation and especially in the details. There were the strong base of the dado and the strong cap, with its projection, like that of its original, of 45 degrees; and there was the resulting necessarily strong projection of the architrave to receive the cap and base. Other details were similarly strong and heavy and the total effect was the effect of architecture and, for its special purpose, architecture misapplied.

But the path of the beginner, and especially in art, is not easy; he meets with many obstacles not encountered by his successor, and his work as done becomes a guide, both negatively and positively, to the man who follows him. The designer of finish as an applied treatment in a room had a harder row to hoe than the man who added finish as a complement to structure. He had to give up charm and quaintness as qualities in his work, qualities which to the early workman were almost accidental, and seek for and consciously exemplify other qualities which should give his work a standing. He turned naturally enough to the prototypes in which these qualities were to be found, but he had to find the qualities out and, having found them, to adapt them; and in adapting them, however unsatisfactorily, he initiated a new art and took the first steps along the road since followed.

The interest in finish from this time on is primarily the interest due to design. We turn from the quality of casualness to the quality resulting from proportion and mass, and to the quality of detail as applied with these in mind. And, this primary source of interest granted, there is a secondary interest in any study of the later development in following the increasingly better adaptation, in the use of design, of means to ends. Used at first for its own sake, design was, in result, merely architecture; but in proportion as the designers mastered their art their work ceased to be inappropriate and extraneous. The Roman influence persisted, only it was more and more modified to the purposes in hand. There was a gradual reduc-

Detail of Restoration Work, Old House at Bolton, Mass.
Biglow & Wadsworth, Architects

Example from Late Eighteenth Century Precedent
Derby & Robinson, Architects

tion in the amount of finish used, a better studied and more appropriate placing of what was used and a tendency toward refinement in the use of detail; the whole development reaching its culmination in the work of 1800 or thereabouts.

The best work of this time,—covering fifteen or twenty years,—is the final and perfect achievement of colonial architecture as a style. The artistry which has been struggling upward for half a century finds its complete manifestation in this work. Design, as applied to finish, is still recognized as a thing in itself, but it is recognized as something more than this. It is a self-conscious art, an art which knows itself and knows what it can do, and more than this, an art which does what it should do. It recognizes as a fundamental purpose the adaptation of itself to the purposes in hand. It is no longer clumsy in adaptation of means to ends. Its results are appropriate. As this is true in general, so it is true also in detail. We find that the details are worked out according to exact standards and may be adapted with accuracy to different proportions. The same design of an architrave, for instance, which is used for a small door may be used for a large door by a definite method of proportioning parts; that is, it is not necessary to re-design the architrave. Similarly with other details. Having cultivated design to this degree it is natural that the architects should have wished to preserve their work in records, hence we find books in which these are preserved like the books of Asher Benjamin. The inevitable result of this, of course, was a speedy decline in the quality of work. The records were put to an artistically unintelligent use and became ultimately "rules of thumb" for the untrained. In other words the 1800 work, reduced to a technique, foundered on its own formulæ.

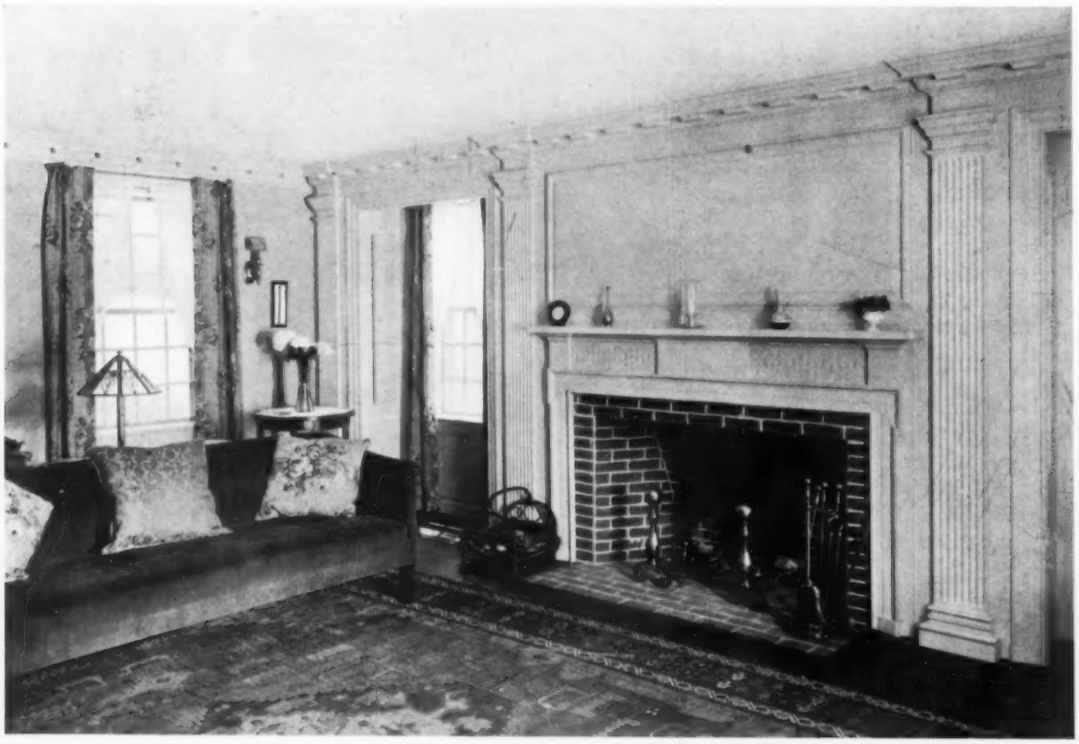
From any simplified general statement, such as we are giving, much important matter is necessarily omitted. In order to cover the development thoroughly it would be necessary to examine the work at frequent intervals. If this were done it would be found that for each stage there were numerous variations of the type. These would vary from the simplest to the most complex design. At every stage, however, two leading variations will be found. The one might be called the "country gentleman" variation, the other the "town house" variation, or, as it might otherwise be stated, the "simple style" and the "grand style." Perhaps the most profitable periods at which to study these two leading variations would be about 1775 and then again, of course, at 1800. In 1775, the differences will be much more strongly marked in the matter of design than they are in 1800, but in 1800 the design will be noticeable for its just adaptation of proportions. The simpler type of 1775 was still strongly influenced by the older work; the Roman overtook it more slowly and less completely than it did the grand style of the same period. Partly this was due, no doubt, to the relative amount of money

Modern Use of Simple Rail and String Detail
Howell & Thomas, Architects

on hand in the two cases, so that we find the grand style more portentously Roman than the simpler style. This was not true of the 1800 work. Here the design is as clearly marked in the simple as in the grand style.

This paper is concerning finish as it developed in the North, and the development as outlined bears this purpose in mind. Certain tendencies and influences are common for all parts of the country, but these are subject to the variations which the different localities impressed upon them. The earliest, or Gothic work, is pretty much a product of New England. At any rate the numerous examples still standing in New England give to this section of the country a strong claim to the style. This is explained, of course, by the fact of earlier settlement. The middle and Southern states had no strong headway in a given direction, such as New England had, when the classic influence made itself felt. For this reason the Gothic work, and the development out of it toward the classic, is pretty much a Northern product. But the classic work itself was more hampered in the North by conditions, chiefly climatic, than in the Southern and middle states. In the South the large rooms and high ceilings gave an ampler opportunity for the application of classic finish, and in the middle states too, especially in Pennsylvania, where the Georgian work impressed itself very strongly, and where we still find standing many fine examples from the time of the latter half of the eighteenth century. In the North, with its cold climate, and perhaps narrower means, the rooms were small and comparatively low studded, and the heavy classic detail was much more constrained than in the South. This shows itself, not only in the design of a room as a whole, but in the designs of parts, all of which had necessarily to be scaled down. The fireplace is the single Northern motive which is as large or larger than its corresponding motive in the South or in the middle states.

Modern Colonial work follows Classic tradition, and, for the most part, that variation of it which might be called 1800 work. Certain of the details and much of the clumsiness of the earlier Classic work creeps into the design of the present day, but generally speaking, it is the 1800 models that are being followed. The result, however, is almost always a debased version of the type. The style, never more in demand than now, must draw more directly and with greater reverence on the old work if it is not to come into disrepute. To prevent this it is necessary for designers to achieve a greater and more genuine interest in their sources of information. There are variations enough in the style to attract and hold the attention of many different types of mind. We cannot, of course, revert, except in unusual cases, to the old form of construction, and the design of our finish must be the design of an applied treatment, but the very old, or so-called native models, need not be altogether neglected on this account.



Living Room of House at Chestnut Hill, Massachusetts, in the Manner of Late Seventeenth Century Work
Derby & Robinson, Architects

Tile and Its Installation

PART I

By E. STANLEY WIRES

THE possibilities in the use of tile have never yet been fully developed, and only through proper co-operation between the manufacturer, the tile contractor and the architect can we reach the ultimate extent of its use and a fuller appreciation of its merits and possibilities. In common with the use of other building materials, under conditions which now exist, there are delays and disappointments attending the use of tile. A variety of shapes and sizes and many special forms and designs pleasing to the architect and the owner are unprocurable. These inconveniences, however, are unavoidable and temporary and must be accepted with the hope that the conflicting influences responsible will soon be reconciled.

Tile factories are principally in Ohio and both floor and wall tile, as well as roof tile, are manufactured in this district. New Jersey, Kentucky, West Virginia and Indiana also have factories engaged in the manufacture of tile. The tile men are banded together in an association called the "Associated Tile Manufacturers" and this association is doing all that can be done to further the interests of the tile industry.

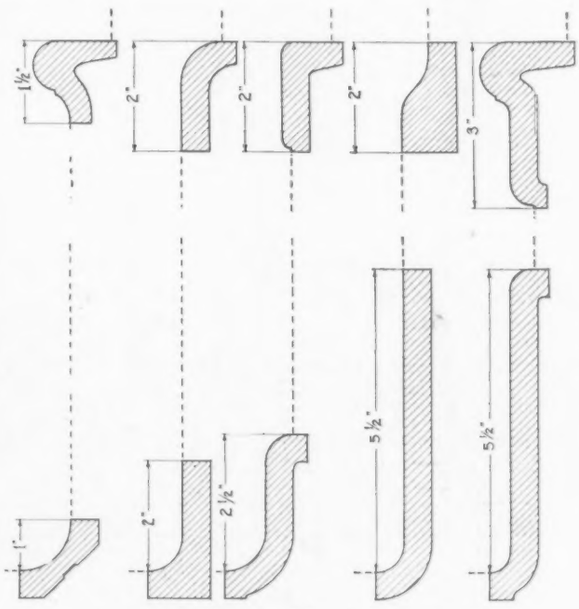
The manufacture of tile requires a variety of buildings and departments in addition to offices and display rooms. Among the principal departments and activities are the clay stock house, the blunging mills and sifting tanks, filtering, clay dry kilns, reduction press rooms, tile drying, designing, packing and shipping.

From the stock room the various materials are automatically weighed into an electric car for transportation to the next department. The clay is subjected to treatments of refining in tanks lined with a heavy insulation of porcelain blocks, impervious to stain. The clay then passes to large filter presses to remove, by powerful compression, the water which must be extracted. When removed from the filter presses, the clay is in a plastic state and all moisture is evaporated in dry kilns, through which the clay cakes pass on cars. These dried cakes are reduced to powder by crushing and sifting and this powder has made possible the clean and even symmetry which characterizes the tile of today.

In the press room this powder is moulded and pressed into shape, and dried on steam drying racks. Placed in special clay boxes, known as "saggers," the tile receives its first burning. Each "sagger" is given a location in the kiln according to a predetermined plan. After burning the tile designed to receive a glazed surface are only partially completed; the unglazed or floor tile have their only firing.

The factories use both a circular oven-like kiln, where the tile remain fixed for a certain period, and also what is known as a tunnel kiln from 200 to 350 feet long, from which a car of tile is drawn every 30 to 50 minutes. Most of the flat glazed tile have the glaze applied by machine, but the more artistic colors and shapes are hand dipped. After a second firing in the glaze kilns the tile are sized and shaded. The white glazed tile go through a machine that automatically stamps each tile with a letter designating a slight change in size, and also stamps the slightly warped tile.

At the present time the white glazed wall tile are classified into three grades, "selected," "standard" and "commercial." These grades are not the result of any intent of the manufacturer to produce different qualities but are the result from the selection made in the product intended to be of the highest possible quality. The Associated Tile Manufacturers have prepared a standard certificate of grade of tile, and such a certificate is sent on request in connection with all tile shipments. On



Cap and Base Sections of Standard Manufacture

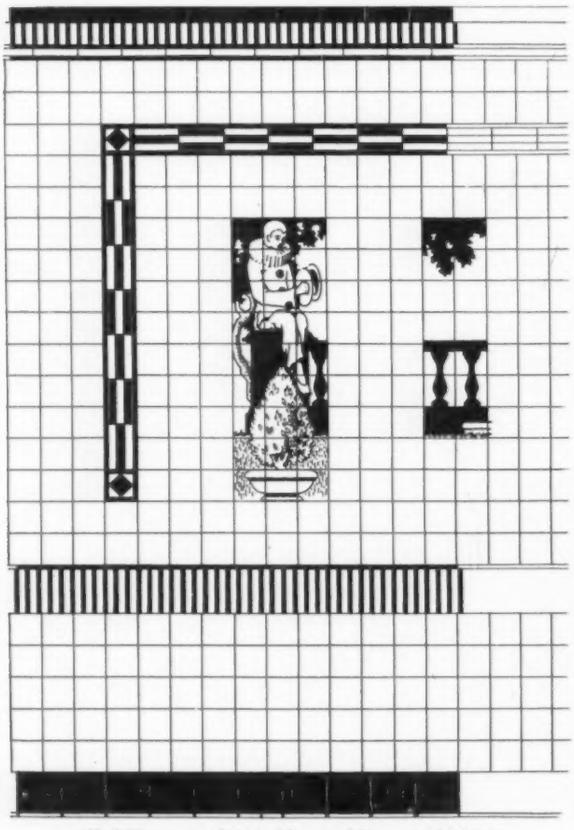
account of the lack of skilled labor and high prices architects should endeavor to use the most economical grade of material suitable for their work.

Wall tile, both white and colored, are produced with a bright finish, in matt finish, and in semi-matt or dull finish. The principal sizes in which the wall tiles are marketed are:

Square		Square		Oblong	
6	inches	9 x 3	inches	6 x 1	inches
4¼	"	6 x 3	"	6 x ½	"
3	"	6 x 2	"	4¼ x 2⅛	"
2⅛	"	6 x 1½	"	3 x 1	"

With the knowledge that these tile are produced in the small units, the architect should be able to design tile wainscots much different from the ordinary stereotyped treatment. The Associated Tile Manufacturers have issued a specification suggesting the use of a few standard cap and base patterns for work of moderate cost instead of the many varieties illustrated in the manufacturers' catalogs. These types, as well as several others of better design, are here shown and can be procured from most of the factories.

The trade term "floor tiles" includes a great variety of sizes and shapes. The unglazed floor tile are classified as vitreous or non-absorbent and semi-vitreous or absorbent, according to the amount of burning they have undergone. The common vitreous colors are white, silver gray, celadon, green, blue and cream. Some of the semi-vitreous colors are buff, salmon, black and red, although several of the reds and browns are very hard and are quite as suitable for any purpose as the vitreous colors, especially as their texture is adapted for such work.



Wall Treatment Using Plain and Decorated Units

Ceramic mosaic is a trade designation for the tile of the smaller sizes, made ¾ inch square, 1 inch and 1¼ inches hexagon and 1 x ½ inch oblong. These tile are mounted on paper, the square size either straight or broken joint and the oblong size usually in herring bone design. Between these sizes and the 3-inch size, inclusive, tile of the same material are designated as "unglazed floor tile"; above this size, up to 6 inches inclusive, they are known as "unglazed floor tile" if semi-vitreous and as "flint tile" if vitreous.

The principal sizes in floor tiles are:

Square		Hexagon		Oblong		Octagon	
6	inches	6	inches	6 x 1	inches	6 inches	
4¼	"	4¼	"	6 x 2	"	4¼	"
3	"	3	"	6 x 3	"	3	"
2⅛	"	2	"	3 x 1½	"		

The term "quarry tile" is usually applied to the thicker and rougher textured unglazed tile. There is a great difference in the hardness of this type of tile and those imported from England are not suitable for weather exposure except under most favorable conditions. The principal sizes in this quarry tile are 12, 9, 6 and 4 inches square while oblong shapes are 6, 4½ and 3 inches wide by 9 inches long.

The size 12 inches square is much more expensive than the other sizes. Certain manufacturers of even rougher textured, hand made quarry tile have adopted sizes as follows:

Square		Square		Oblong		Hexagon	
4½	inches	2	inches	6 x 2½	inches	3⅝	inches
4	"	1¾	"	2 x 3	"	2½	"
2¾	"	⅝	inch				

"Faience tile" takes its name from the town of Faenza in Italy and is applied to many kinds of decorated, glazed and enameled tiles. These tiles can be procured in practically any size and shape and the important thing to remember is that several months are necessary for the manufacture of this material under present conditions.

Appropriate uses and proper setting of tile are matters usually settled by the architect and tile contractor, and today the contractor has an excellent opportunity to co-operate with the architect and render the benefit of his personal experience as well as that of the manufacturer. He should combine an adequate knowledge of tile and tile design with an intelligent labor organization and should convince the architect that it is to his advantage to deal directly with the specialist. Proper consideration should be given to estimates and designs. A properly organized business is entitled to not only the cost of material, labor and a profit, but also the item of "overhead" covering office and shipping expense, interest, depreciation, etc. Many dealers ignore this and the ultimate result is defective work.

Sprinkler Installation for Fire Protection

PART IV—GENERAL DISSERTATION ON AUTOMATIC SPRINKLERS

By W. D. BROWN, C.E.

CAREFUL planning of a building and a thorough understanding of sprinkler requirements will result in a saving on the cost of the system and will also prevent unsightly breaks in sprinkler pipes.

For example, in planning intermediate partitions it will often be possible to locate them in relation to ceiling beams so as to avoid extra sprinklers. Partitions constructed of wood and glass should, if possible, be so arranged that piping will pass through mullions or mouldings without offsets.

Conveyors, shaftings and other obstructions on ceilings should be considered. Arrangements should be made for openings in foundation walls for supply pipes, sleeves for riser pipes and inserts for hangers.

The wisdom of these considerations can be appreciated when it is understood that all pipes, hangers and other materials are cut especially for each contract and are shipped to the building ready for assembling. In case of a revision at the building a large portion of this material cannot be used.

Underwriters require that plans showing inside and outside systems of piping, also all valves, details of sprinkler systems, etc., be submitted for approval before starting work at the building. Therefore it is recommended that ample time be allowed between the signing of the contract and the designated time for starting work. This period can be utilized for co-operation with other contractors and a careful consideration of the layout with the underwriters and the owner.

PLANS—All features required on a sprinkler layout can be shown on plans drawn to a scale of one-eighth of an inch to 1 foot. In addition to showing floor plans of sprinklers a section through each building should be prepared. Plans and sections should show arrangement of piping together with location of risers, L. T. fittings, valves, tanks, etc. Size and length of each piece of pipe should be marked. The standard practice is to designate the size of pipe above the pipe line and the length below. See Figs. 1 to 4 in the August issue.

Locations of partitions, decks, skylights, beams, columns and all other features necessitating additional sprinklers or causing offsets in sprinkler pipes should be shown. Dimensions such as width of bays, length of building, height from floor to ceiling, thickness and construction of floors, sizes of beams, girders and floor joists, should be shown on plans or sections. Care should be taken in running piping to avoid interference with structural or decorative members of buildings, stairways, stair wells, windows, doors, transoms, etc. Special efforts should be given to avoiding pockets and extra drips. A peculiarity which has caused considerable confusion is the fact that inasmuch as a sprinkler system is located on the ceiling the plan should show features on the ceiling and not on the floor.

THEATERS AND CAR BARNS—Owing to the nature of construction and occupancy of theaters and car barns special rulings have been made to cover special conditions. These rulings vary somewhat with different inspection bureaus, but these rules are as near standard as possible and have been adopted by the majority:

In theaters sprinklers are located on roofs of stages, gridirons, fly galleries, painters' bridges, basements and all retiring rooms including toilets.

In lobby and auditorium sections sprinklers are omitted. Special permission should be asked for the omission of sprinklers in concealed spaces over auditoriums.

Sprinkler lines should run on top of gridirons and heads should be nippled down so that tops of deflectors will be 1½ inches below beams. Splash plates should be provided over sprinklers on gridirons to prevent the water from roof sprinklers wetting the solder on heads below, which would destroy their sensitiveness. (Splash plates are small metal collars over sprinklers.)

Under stages proper sprinkler lines should be equipped with shut-off valves and drains to near cross mains. This arrangement will permit the removal of pipes under traps with the added feature of having protection on the remaining portions.

Separate shut-off valves should be used to divide sprinklers into three units,—*I*, stage basement; *II*, all sprinklers above stage; *III*, auditorium basement including auditorium.

Sprinklers are located over a proscenium arch for the purpose of wetting the asbestos curtain and forming a water curtain between stage and auditorium. This arrangement consists of two lines of sprinklers spaced not more than 8 feet on centers, the top line being automatic and the lower line open type.

The open sprinklers are operated manually by a quickly opened valve located above the stage floor, and are installed below the automatic sprinklers. Sprinklers should be located just below an asbestos curtain when curtain is down. Gongs should be located where the noise will not cause a panic.

CAR BARNS—A standard sprinkler system should be installed in all portions of a car barn and additional "aisle line sprinklers" should be placed on both sides of tracks, in an upright position, on horizontal pipe lines parallel with tracks, and so located that water will spray directly into cars through side windows of car bodies. The sprinklers must be at such a height that their deflectors will be from 2 to 4 inches below the upper sash rails of car windows.

The aisle sprinkler line should be placed not less

than 6 inches or more than 12 inches from sides of cars to be protected. An exception may be when the distance between sides of cars on adjacent tracks does not exceed 4 feet when one line of sprinklers should be placed in the center of each aisle. Lines of sprinklers should be placed to cover between sides of cars and partitions or outer walls. Distance between sprinklers on aisle lines should not exceed 8 feet. No pipe smaller than 1 inch should be used and all sprinklers on adjacent lines should be staggered.

Automatic Sprinklers as a Life Saving Proposition

A modified automatic sprinkler system is often installed in apartment houses, hospitals, schools and other public buildings for the purpose of saving lives rather than insurance saving. In such installations the sprinklers are omitted where the fire hazard is negligible.

All basements, attics, store rooms, sleeping quarters, laundries, kitchens and attachments, tops of elevators, light and ventilating shafts, hallways, exits and retiring rooms, including toilets, should be protected. The moral effect of the presence of water in stairways and exits, in case of fire, has a tendency to calm excitable persons and has been known to avert a panic.

Specifications

Owing to the varying sizes and characters of sprinkler equipments standard specifications cannot be used, but some suggestions will cover essential items necessary with the average system.

There should be a paragraph in the specifications giving the definitions of the words, "Contractors," "Engineers" and "Owner." All items, unless otherwise noted, should be furnished by contractor.

Detailed information should be supplied covering these details:

(1) Name and location of concern to which proposal is to be submitted.

(2) Name and location of property to be equipped.

(3) Name and numbers of buildings in which the systems are to be installed.

(4) Whether systems are to be wet or dry.

(5) Number and date of requirements which are issued by the inspection department.

All piping, valves, tanks, etc., should conform to these requirements. *Note:* The procedure for obtaining requirements is to submit an application to the inspection department having jurisdiction. A surveyor or inspector will examine the plans to ascertain the exposure, hazard and available water supplies and from his report the requirements will be established.

The insertion of this paragraph will shorten the specifications:

"It is understood and agreed that all material used shall be of standard quality, that plans will be submitted and work thoroughly done and system tested when completed to the satisfaction of the (name of inspection department having jurisdiction)."

An interpretation of this paragraph denotes that the sprinkler contractor will submit plans to the inspection department and obtain their approval before starting work and that all fittings, hangers, pipes, valves, etc., shall be so constructed as to conform to requirements. It also stipulates that the contract is not completed until the installed work is inspected and approval acknowledged by reduced insurance rates.

"Duplicate of plans submitted to the underwriters, shall be forwarded to the (architects, engineers or owners)."

"It is understood and agreed that the contractor will start work at (give size of pipe, location and description of starting point)."

AUTOMATIC SPRINKLERS—"Contractor shall install a complete (wet or dry) pipe system of automatic sprinklers in buildings (number and description of buildings). It is estimated that (total of sprinklers) will be required."

"In case more or fewer sprinklers should be necessary they shall be charged for or credited at (agreed price) per sprinkler."

All contracts should contain this pro-rata clause to cover small changes at building.

If high temperature or corro-proof sprinklers are necessary, number and locations should be specified.

OPEN SPRINKLERS—"Contractor shall install a complete system of open sprinklers consisting of (total number and size of orifice) to be installed on (give description of location), making (size) connection to (source of supply) with necessary controlling valves and draw-off piping. All pipes on system side of controlling valve, and all fittings and hangers outside of building to be galvanized."

VALVES—"(Alarm or dry pipe) valve (or valves) to be installed as outlined in requirements."

"Above (valve, or valves) to be connected to electric alarm gong (specify location). This connection is to include electric alarm gong, batteries, wiring, switch and cleats; also annunciator, conduit and hood when required."

"(Number) water motor alarms to be furnished and connected in a standard manner on the outside of the building at locations satisfactory to the inspection department."

"Contractor shall install necessary gate and check valves to conform to National Board of Fire Underwriters' standard." Gate valves should be located under alarm and dry pipe valves in main sprinkler risers and in supplies to adjoining buildings; also, as in the case of department stores, special efforts should be made to reduce water damage by installing a valve on each floor. Ladders or riser steps should be provided for floor shut-off and draw-off valves and check valves installed in supply pipes. Give number and description of valves needed or direct attention to valves shown on requirements.

DRAINS—"All wet systems should pitch at least ¼ inch in 10 feet and dry system ½ inch in 10 feet

for drainage. Main draw-off for system should be properly connected so as to permit full flowing capacity of a 2-inch pipe. Auxiliary draw-offs shall be satisfactorily connected."

HANGERS—"All inserts for hanger rods and sleeves for pipes shall be furnished, together with complete plans showing location, by the contractors and installed at building by owner."

Inserts for sprinkler piping should be of a type to provide for horizontal adjustment and of a size suitable for standard hanger rods approved by the insurance laboratories. Owing to the special design of these inserts, it is recommended that they be furnished by the contractor. Owner should arrange to set inserts on concrete forms to avoid special trips to buildings by contractor.

EXTRA SPRINKLERS—"Contractor shall leave at the building a cabinet with twelve sprinklers and sprinkler wrench to be used in case of emergency."

STAND PIPES, ROOF HYDRANTS AND HOSE CONNECTIONS—"(Number) (size) standpipes in (descriptions of location) with (number) (size) hose out lets, connected to source of supply, with controlling valves and draw-off connections."

"Hose equipment as follows: (number) (size) (number)-way roof hydrants to be installed on (description of buildings), connected to sources of supply, with controlling valves and draw-off connections."

"(Number) (size) hose connections, attached from 2½-inch or larger sprinkler pipe. Outlet for hose to be 1-inch. Should be installed (locations). Each connection shall be complete with control valve, hose, ½-inch or smaller hose nozzle and rack clamped to pipe or bracket attached to wall."

FIRE DEPARTMENT CONNECTION—"(Number) (single, two-way, three-way, four-way) fire department connection (descriptions of location, sidewalk, wall, etc.) connected to system in a standard manner complete with approved caps, check valve and automatic ball drip."

FIRE PUMPS—"(Number) (——) gallon National Standard Underwriters' Steam Fire Pump. (Number) (——) gallon (electric—rotary—triplex—centrifugal) Standard Underwriters' Fire Pump (——) volts, (direct-alternating) current, (——) cycle, (——) phase."

"(Designate) shall provide foundations with anchor bolts for (description) pumps. (Designate) to set pumps. (Designate) shall furnish (direct-alternating) electric current, including necessary switchboard, starting device, etc. (Designate) shall make wiring connections from switchboard to motor."

"(Designate) shall provide pump house, when necessary, of required dimensions."

"(Designate) shall provide steam connection, from proper size valved outlet to pump, and exhaust connection from pump to atmosphere. Contractor shall provide (size) suction pipe from (cistern—reservoir—city water supply) to pump, including (post valve—gate valve)."

"Contractor shall make proper connection from discharge of pump to (underground supply line), including necessary check and gate valves, and connection from waste cone to outside of pump room."

"Contractor shall provide connection from tank filling pump to tanks, with necessary controlling valves."

"Contractor shall furnish (number) -way hose connection at convenient point outside pump room and connect with discharge of pump, including shut-off valve, hose thread to conform to local fire department standard."

"(Number) (——) gallon (wood—steel) priming tank complete with connection to pump, set on supports provided by (——)."

"(Designate) to provide filling pipe for priming tank, including ball float valve."

"(Designate) to provide necessary priming connection to pump from city water supply."

PRESSURE TANK—"(Designate) to furnish (number) (——) gallon steel pressure tanks, placed on foundation or supports, including necessary saddles to be located on (roof-story) as required, height to allow of standard piping connections, built in accordance with requirements of underwriters having jurisdiction and municipal authorities, with necessary outlets to be located as shown (——)."

"(Designate) to provide tank house at (location) of required dimensions for enclosing pressure tank. (Designate) to supply light and heat for tank house."

GRAVITY TANK—"(Designate) to furnish (number) suitable (——) gallon (wood or steel) gravity tanks. (Designate) to furnish structure and supports of standard spread. Tank structure, etc., shall be in accordance with requirements of (insurance companies, architects, engineers, municipal authorities) to be located (give description of location—on building—separate structure away from building), as shown on (name) insurance (plan—requirement) date (——)."

"(Designate) to furnish proper foundation for (——) tank and set tank in standard manner."

"(Designate) to box exposed riser piping, shut-off and draw-off connections, including painting."

"(Designate) to provide proper piping from tank to (sprinkler system—underground system) including controlling valves, draw-off, filling and overflow connections and (altitude gauge—pneumercator)."

HEATERS—"(Designate) to furnish (steam hot water tank heater—coal fire hot water heater—gas hot water heater) placed at location indicated."

"(Designate) to furnish necessary connections from tank heater to tank and to (steam—hot water supply). (Designate) to furnish valved outlet at (location) from sufficient steam or hot water supply (and suitable house for heater). (Necessary smoke piping) for coal fire heater. (Necessary gas supply for gas hot water heater, exhaust pipe to atmosphere.)"

To prevent water in exposed elevated gravity tanks from freezing the tank heater has been designed. In detail the steam supply is connected to a brass coil located inside of heater; cold water, returning from base of tank riser, is heated by passing through shell enclosing the coil and warm water is discharged into tank by a small flow pipe. A thermometer on the return pipe indicates the temperatures of the coldest water in tank. Water accumulated through condensation is discharged through a steam trap.

The tank heater is an improvement over the steam coil in tank proposition, which fails when steam pressure is allowed to drop below the point necessary for circulation.

In case tank is heated by brass coil inside of tank:

"(Designate) to supply brass heating coil of sufficient size in gravity tank, return and supply pipes, (trap), gate and check valves. Supply outlet at (——) return outlet at (——)."

UNDERGROUND PIPE AND FITTINGS—"Contractor shall furnish and install cast iron piping as shown on (description) plan. Pipe shall be approved bell and spigot type in standard 12-foot lengths. All underground joints to be well leaded."

"Contractors to furnish and install (gate—check) valves." (Description where used) (as shown on plan) as follows: (number) (size)."

"Contractors to furnish and install post indicator valves (shown on plan) as follows: (number) (size)."

"Contractor shall furnish and install hydrants (with—without) independent hose valves (shown on plan) as follows: (number) (size) (number) (-way)."

"(Designate) to furnish necessary pits for (name of valves). Pits to be of standard dimensions."

"(Designate) to furnish (size) city water supply connection at (curb—property line), including meter if necessary."

MISCELLANEOUS—"It is understood and agreed that the (——) shall pay all freight and carting charges on material herein specified."

"It is understood and agreed that (——) are to do all carpenter and mason work necessary for this installation. Staging to be erected by (——)."

"(Designate) to do necessary trench work including excavating and back filling." Specify type of soil and whether shoring will be necessary.

"(Designate) shall paint all sprinkler pipes, fittings, etc., in (section—building) with (number) coats of (color and kind) paint. Pipe to be thoroughly cleaned below painting."

Owing to the fact that sprinkler contractors employ experienced mechanics, it is not expected that they should build valve houses, hydrant houses, provide foundation and arrange setting of pumps and tanks, erect tank structures, construct boxing for tank drop, build valve pits, do mason and carpenter work, trench work and painting. It is recommended that the owner provide for these details, as in most cases men doing this sort of work are employed at the building.

Combined Heating and Sprinkler System

A combined heating and sprinkler system is no new discovery but is a combination of old and proven practical devices of heating and sprinkler equipment. It consists of a slightly modified standard automatic sprinkler equipment, hot water for heating purposes being conducted in sprinkler piping.

The fundamental feature is the method of insulating the sprinkler from the hot water pipe. This insulator or water trap is a curved ¾-inch pipe, projecting from the hot water main and approximately 14 inches long. It is so arranged that a loop is made to form a pocket. The lower portion of the pocket is below the center line of the hot water main with the sprinkler elevated above this level. This method, slightly modified, has been used for years as a siphon cock for protection on steam gauges.

Other modifications are:—pipes for connecting the ends of the stringer or branch lines to a common return, a circulating pump, a hot water heater, a hot water supply pipe, a by-pass piping around the alarm valve, pressure relief valves and other necessary valves and fittings.

The hot water heater, which heats the water to a temperature not to exceed 212° Fahr., is connected by means of the hot water supply pipe to main sprinkler riser about 5 feet above and on system side of alarm valve. A valve is installed in the supply pipe so that hot water supply may be shut off from the sprinkler system when necessary. Risers, cross mains and branch lines remain the same as in a standard equipment.

The ends of branch lines used for heating purposes are piped together in convenient groups, and the return from these groups, which are provided with shut-off valves, run to a hot water return. The main return is either connected direct to the hot water heater or through a circulating pump. A by-pass is connected around the alarm valve and relief valves are installed in the hot water supply pipe at the heater to take care of expansion and contraction. No concealed pipings are installed and clean water only is used.

Where the sprinkler system does not furnish sufficient radiation to properly heat the building, additional pipe coils or radiators are installed. This auxiliary radiating system is independent of the sprinkler system.

When one or more sprinklers operate the reduction in the pressure above the alarm valve causes the valve to operate and the system to act as a standard sprinkler equipment. In establishments where a steam plant is installed the exhaust steam from engines, pumps, etc., is used for heating the water.

A summary of a report on combined heating and sprinkler systems for the Underwriters' Laboratories, Inc., and under the direction of the National Board of Fire Underwriters reads:

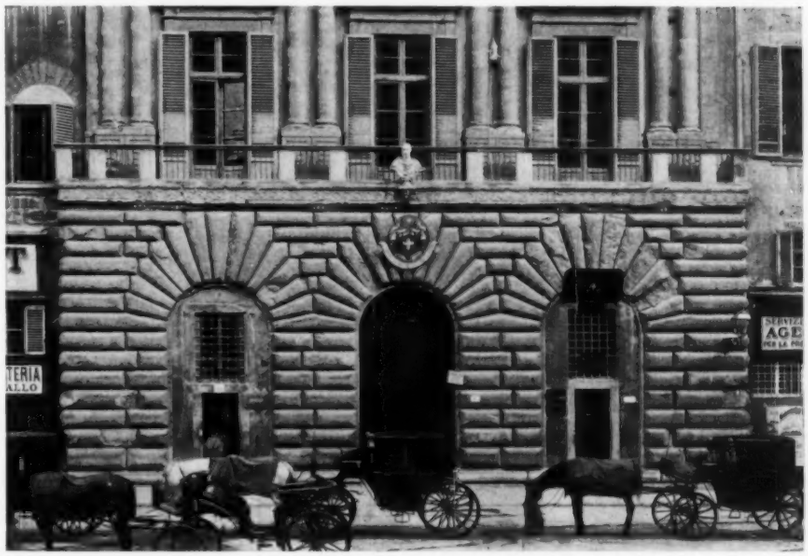
"From the conclusions drawn it will be noted that the design and construction of the combined heating and sprinkler system are suitable for the class of service for which the system is intended; that it is practical to install and maintain the system without unusual difficulty; that the system is not subject to rapid deterioration; that the parts and assembled system are capable of safely withstanding all stresses to which they are likely to be subjected under ordinary service conditions; that the system is reliable in operation; that accident hazard is remote, and that the parts can be uniformly made and uniformly assembled and installed."

Italian Renaissance Details

A COLLECTION OF MEASURED DRAWINGS BY WM. D. FOSTER

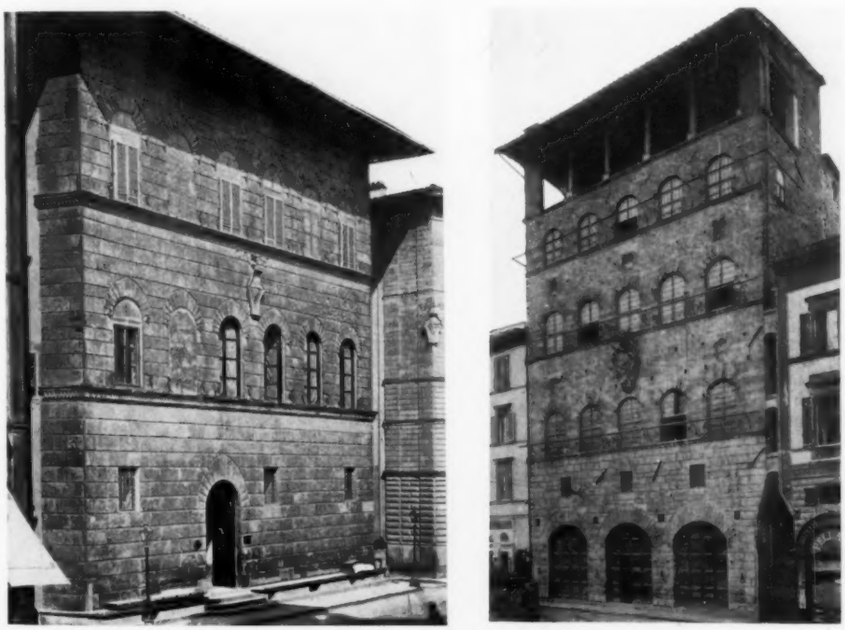
THE effect that is obtained from the rustication of a wall depends upon the study of the joints and the texture of the stone surfaces; these may result in giving a very sturdy and rugged appearance or in only slightly accenting the rusticated beyond the other portions of the building. The most interesting examples of rustication are to be found in renaissance work. Constructed at a time when there were wars not only between cities but between families and even individuals, the buildings of the time were very generally made to appear strong and capable of resisting attacks as well as actually being so. The gates of the cities as, for example, the gates of Verona by San Michele, were usually rusticated in a vigorous way that adds materially to their appearance of solidity and strength.

The three examples of rustication here shown are from the smaller palaces of Florence, of the late fifteenth century, and illustrate three variations of strengthening the appearance of the lower stories with rustication.

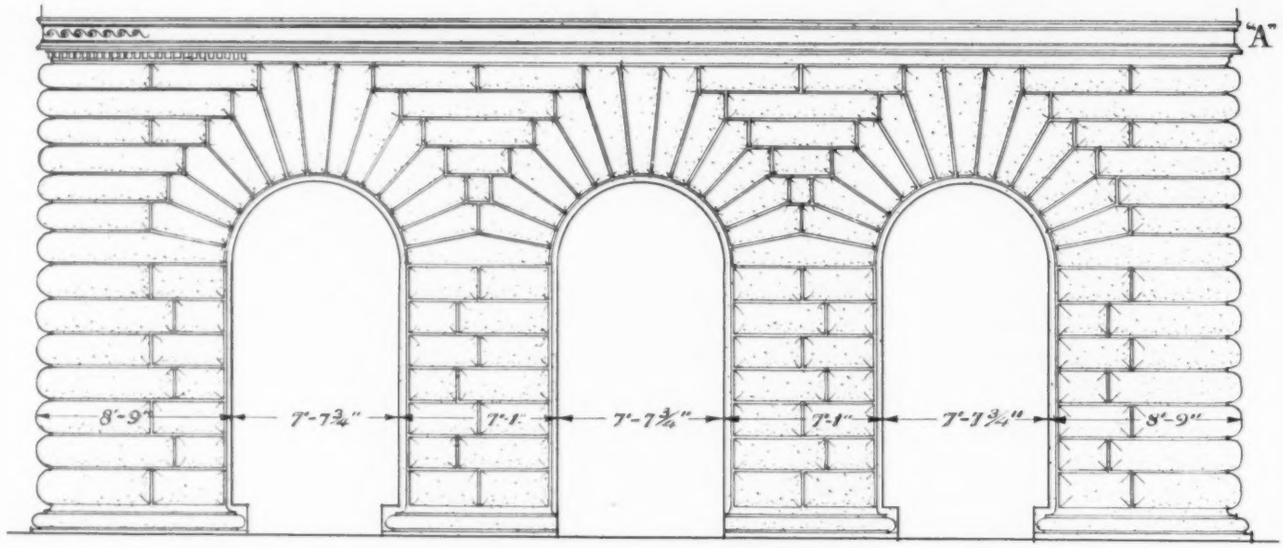


Detail of the Palazzo Uguccioni, Florence

The Palazzo Uguccioni is of the particularly rugged type with very deeply recessed joints, the projection of the stones being from 7½ to 8 inches beyond the joints. The surface of the stone also is rather deeply tooled. The rustication of the Palazzo Davanzati and the Palazzo Antinori is much flatter and the surface of the stone, accordingly, is tooled more lightly. In each of these cases the stones project from the joints from 1 to 1½ inches. The rustication in the Palazzo Davanzati stops at the band course while in the Antinori instance it continues up the whole façade, being slightly lighter above the band course. The Palazzo Antinori is one of the finest of all examples of the renaissance palace both in proportion and refinement of detail. The treatment of the lower courses, where the projection forms a seat as well as a base to the building, is interesting and was used on several of the other palaces. In all three of these buildings the rustication is carried around the sides for about five feet.

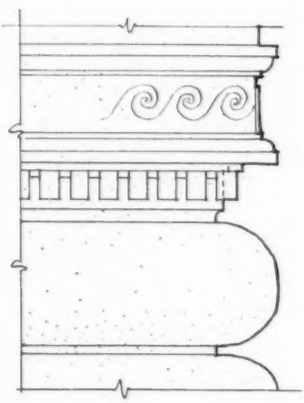


Two Florentine Façades, Palazzo Antinori and Palazzo Davanzati

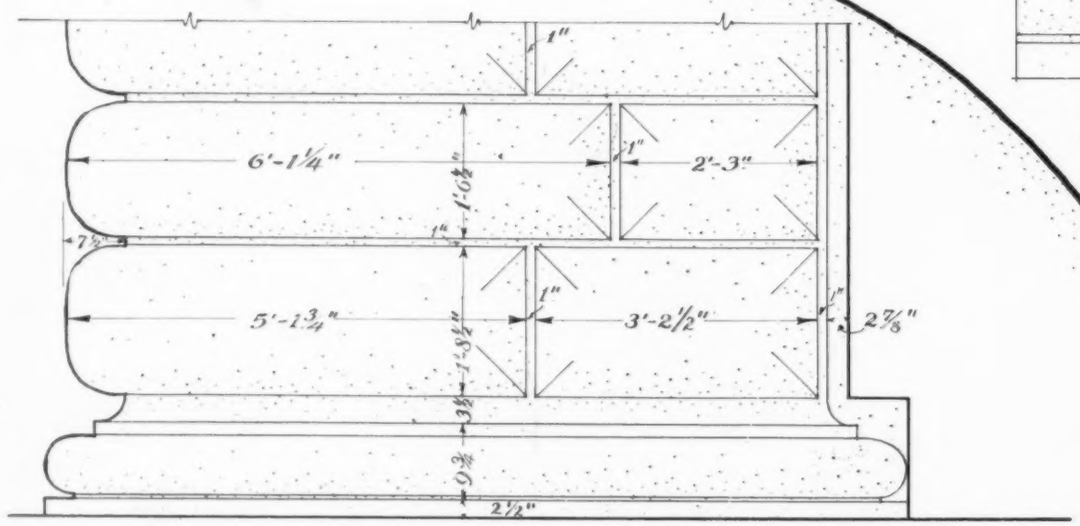


ELEVATION·OF·FIRST·STORY
SCALE · ⅛"-1'-0"

F·S·PROFILE·OF·RUSTICATION

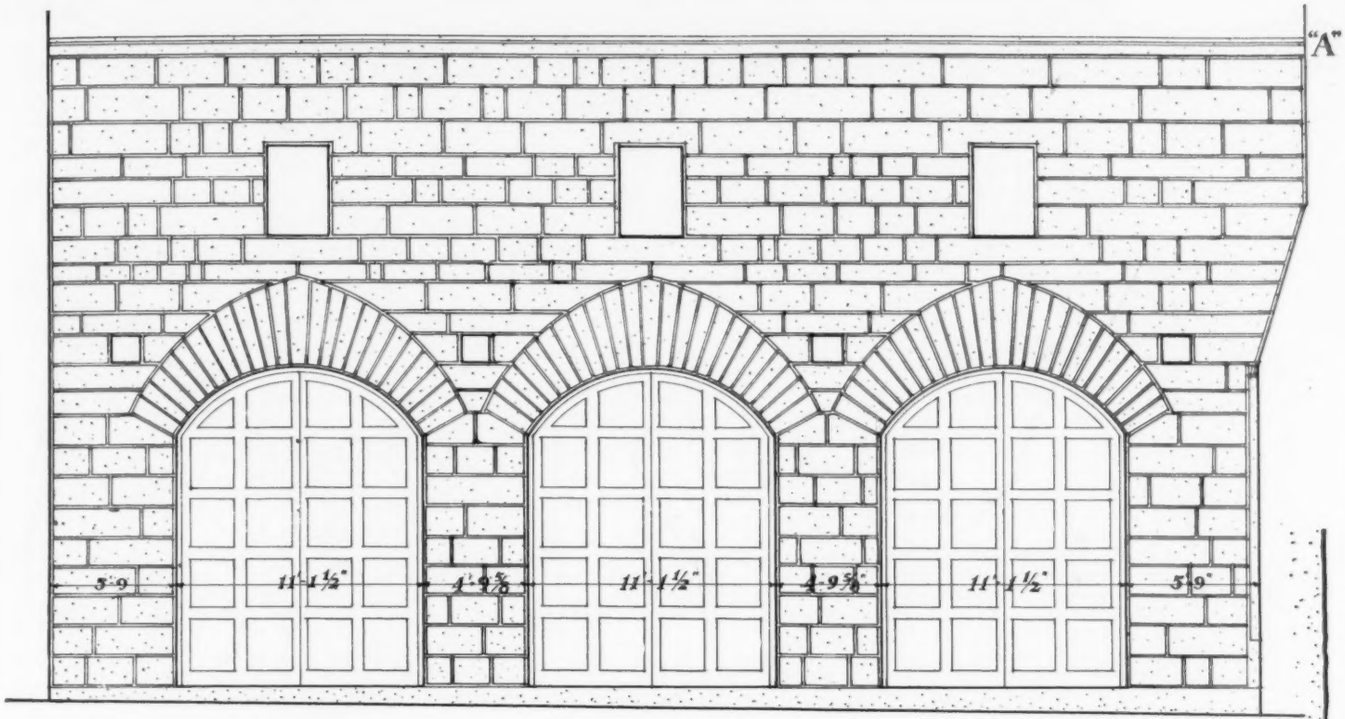


DETAIL·AT·"A"

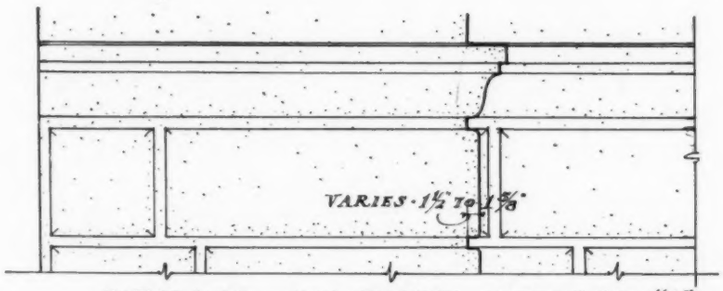


DETAIL·OF·LOWER·COURSES
SCALE · ½"=1'-0"

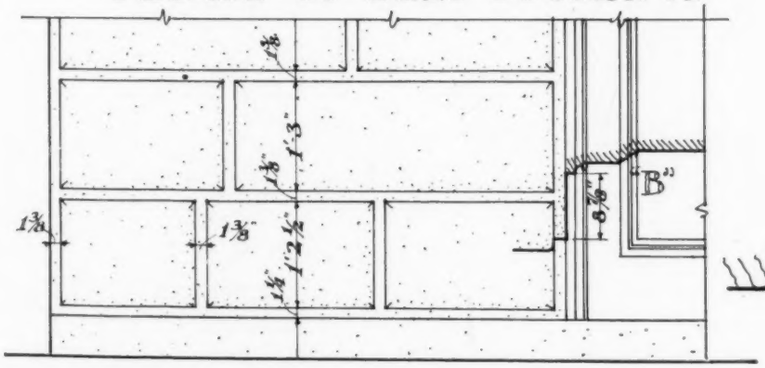
ITALIAN DETAILS 1920	PALAZZO UGUCCIONI FLORENCE	MEASURED and DRAWN · by WM·D·FOSTER



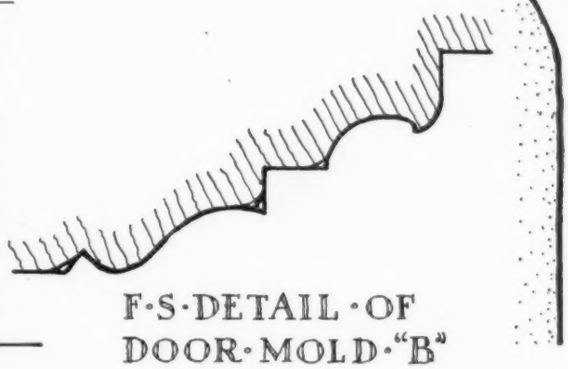
ELEVATION · OF · FIRST · STORY
SCALE · ⅛" = 1'-0"



DETAIL · OF · BELT · COURSE · "A"



DETAIL · OF · LOWER · COURSES
SCALE · ½" = 1'-0"



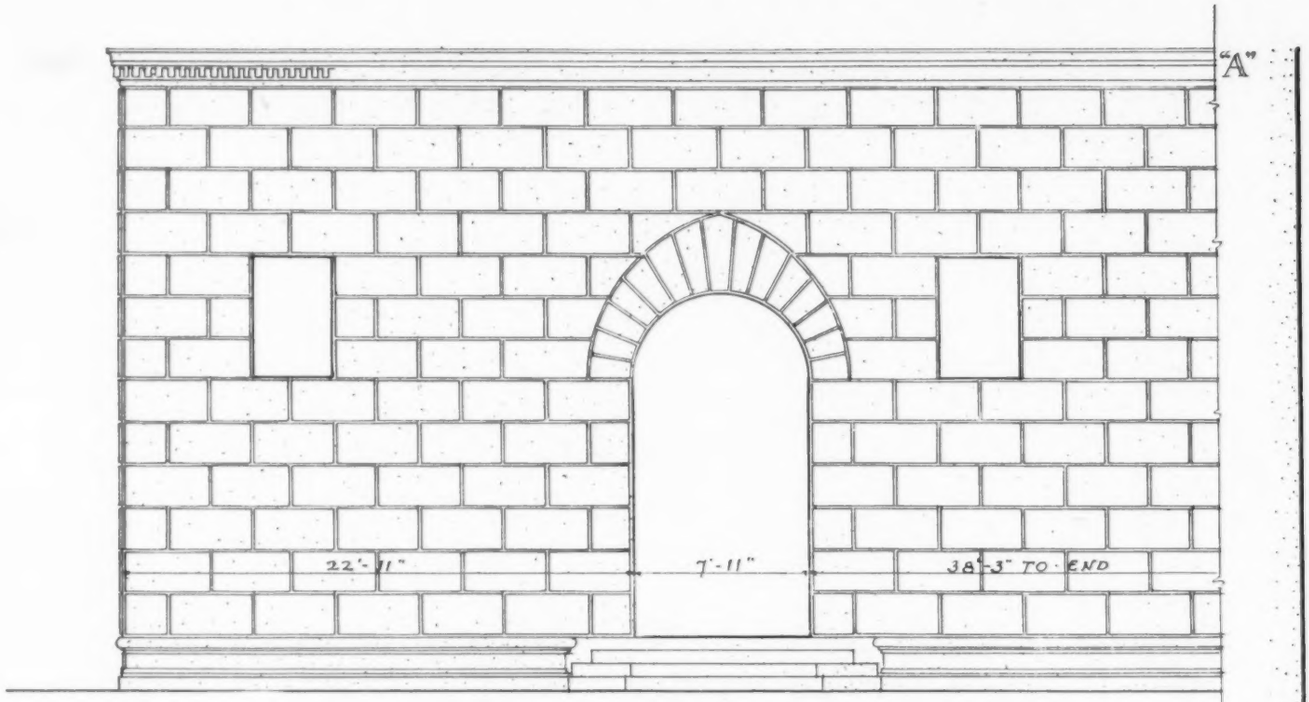
F · S · PROFILE · OF
RUSTICATION

F · S · DETAIL · OF
DOOR · MOLD · "B"

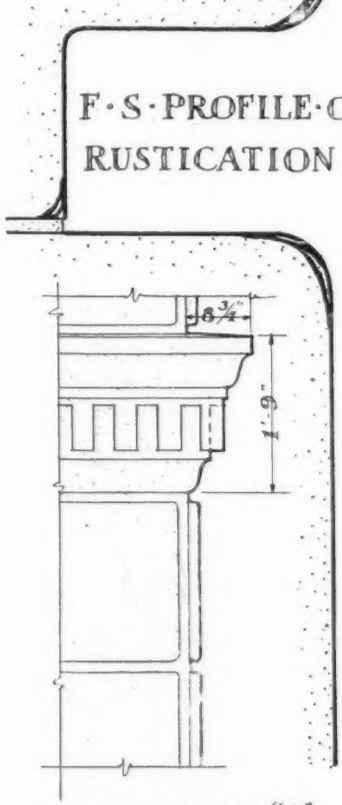
ITALIAN
DETAILS
1920

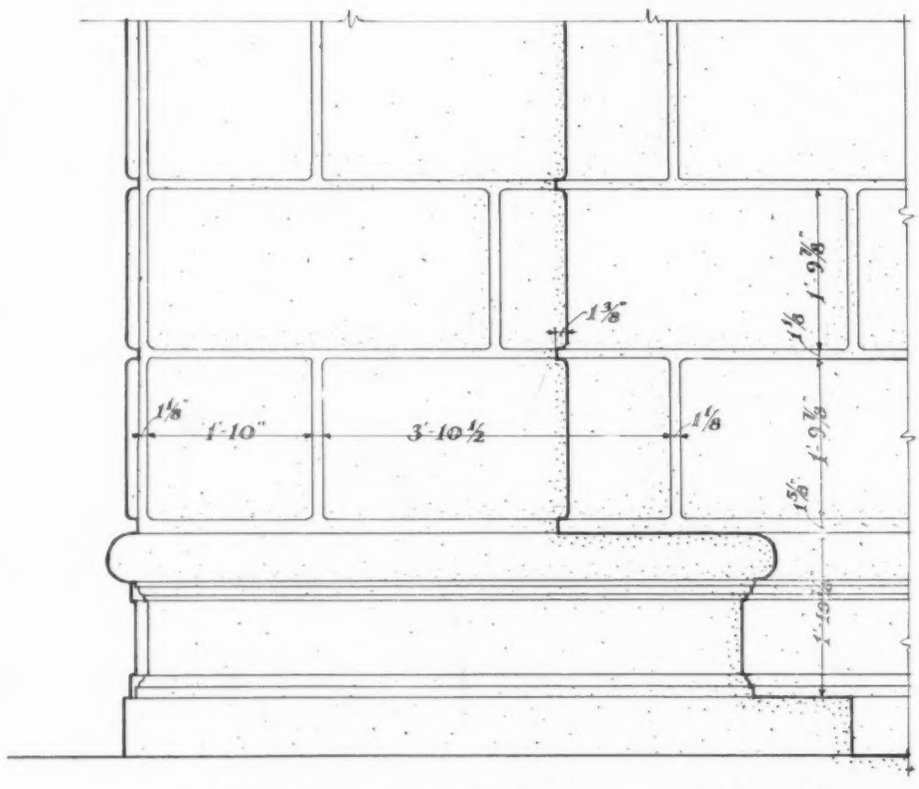
PALAZZO DAVANZATI
FLORENCE

MEASURED and
DRAWN · by
WM · D · FOSTER



ELEVATION · OF · FIRST · STORY
SCALE · 1/8" · 1'-0"





DETAIL · OF · LOWER · COURSES
SCALE · ½" · 1'-0"

DETAIL · AT · "A"
½" = 1'-0"

ITALIAN DETAILS 1920

PALAZZO ANTINORI FLORENCE

MEASURED and DRAWN · by WM · D · FOSTER

ARCHITECTURAL & BUILDING ECONOMICS DEPARTMENT

C. STANLEY TAYLOR, *Associate Editor*

Encouraging Conditions in Building Construction Field

DURING the past month there have been a number of unusual developments in the building construction field, many of which are of an encouraging nature, directly affecting the volume of work which may be expected next year. Never in the history of the industry has building been so definitely a subject of national interest. The voicing of popular demand for relief from the present condition of building shortage is having its effect in the development of intense interest in the subject on the part of federal, state and municipal legislative bodies. Organized efforts are being made throughout the country to bring about the release of funds for building and permanent mortgages, the stabilization of material prices, betterment of transportation conditions and the establishment of more amicable and stable labor relations.

Regarding the general economic situation the National Bank of Commerce has recently issued a statement that the banking situation is improving rapidly. One section of this report is of direct interest in its application to conditions which are reflected in the building industry:

"A number of factors have facilitated the improvement in the credit outlook. As the continued improvement in transportation permits more normal movement of commodities the mobility of credits is gradually being restored. Progress is being made in the liquidation of commodity stocks and of loans against them. While the downward trend of prices involves current difficulties, it is a movement toward greater rather than less stability in both the credit and the general business situation, since it tends to reduce the pressure on banking facilities and at the same time to stimulate the large potential demand for goods which increasingly high prices had impaired. In contrast with the movement in progress a year ago, therefore, the general trend of business conditions within the United States is in the direction of increasing soundness and stability.

"Prices continue to move downward in many important groups of raw products, and of semi-manufactured materials for use in further manufactures. Declines have been passed on to the finished product in some lines. Unless untoward social and political developments should take place in Europe, however, it now seems likely that in the case of most commodities the period of rapid price adjustment has passed and that fluctuations from now on will be through a gradually narrowing margin. Present price movements, however, must be interpreted with the greatest care. Cases in point relate to those commodities the prices of which appear superficially stable, but in which, as a matter of fact, almost no business is being done. In such

INDUSTRIAL QUESTIONS	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Are building operations in your territory increasing or decreasing at this time?	Increasing	Decreasing	Decreasing	Decreasing	Increasing	Increasing	Increasing	Decreasing	Increasing
In what classes of the following buildings is the greatest activity manifest? (*a*) Warehouses and factories, (*b*) Office buildings and stores, (*c*) Low priced dwellings, (*d*) High grade dwellings and apartments	Warehouses Factories Stores	Warehouses Factories Low priced dwellings	Low priced dwellings Warehouses Factories	Low priced dwellings High grade dwellings Apartments	Warehouses Factories Low priced dwellings	Low priced dwellings Warehouses Factories	Low priced dwellings Office buildings Stores	Low priced dwellings Office buildings Stores	Low priced dwellings Warehouses Factories
What is the extent of the increase in the cost of labor over 1919?	10 to 50%	20 to 40%	10 to 40%	10 to 50%	10 to 50%	5 to 40%	20 to 50%	5 to 30%	10 to 30%
Is labor increasing in productivity per man?	No	No	Slightly	No	No	No	No	No	Yes
Is there a shortage of labor?	No	Yes	No	No	Slight	No	No	No	No
Is there evidence of unemployment?	No	Slight	No	No	No	No	No	No	No
How do the wholesalers and retailers regard the prospects for fall and winter?	Good	Uncertain	Fair to good	Good	Good	Good	Good	Fair to good	Good
Are manufacturing plants well filled with orders?	Yes,—some cancellations	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Is there a shortage of raw materials sufficient to curtail production?	No	No	No	No	No	No	No	No	No
Is there a shortage of coal?	Yes	Yes	Yes	Yes	Slight	Yes	Yes	No	No
Is the shortage of freight cars being substantially reduced?	Yes	Yes	Yes	Yes	Yes	Slightly	Slightly	Slightly	Yes
Are general transportation conditions improving?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are industrial concerns carrying large amounts of customers' paper?	Yes	No	Yes	Yes	Yes	Normal	No	Normal	No
Are industrial concerns discounting their bills?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
What is the sentiment regarding Govt. ownership of railroads?	Opposed	Opposed	Opposed	Opposed	Opposed	Opposed	Opposed	Opposed	Opposed
What is the sentiment regarding general co-operative movements?	Opposed	Favorable	Divided	Favorable	Favorable	Favorable	Favorable	Divided	Opposed

An interesting analysis of national conditions and public sentiment recently made by the Fidelity and Deposit Company of Maryland shows facts of interest to the building industry.

Table Based on Questionnaire from Nine Hundred Sources

cases actual values cannot be known until trading operations are resumed.

"Curtailment of manufacturing and merchandising activities was inevitable while price changes were radical in character. On the other hand, slowly declining prices require that business be carried on cautiously and with careful thought to the long future, but do not preclude sane and conservative operations. Unwillingness to face the facts in the hope of a return to another period of rapidly rising prices, and failure to admit that a new working basis must be found, not only react on the individual interests involved, but on the entire business community. Fortunately the facts have been recognized by many interests, but in some lines failure to do so is handicapping business."

An important analysis of general conditions throughout the country has just been made by the Fidelity and Deposit Company of Maryland. In order to determine actual economic conditions this concern sent a questionnaire for telegraphic reply to nine hundred specially selected representatives who answered the questions after careful investigation. The section of the questionnaire and replies of most direct interest is given in tabular form here.

New York legislators have been giving consideration to a number of remedial measures in order to provide relief from the acute housing shortage. These included proposed bills establishing building and mortage loan funds financed through state and municipal sinking funds and bond issues, exemption from taxation for a period of years on all new residential structures, a special tax on funds of insurance companies, savings banks and similar institutions not invested in mortgages together with many similar measures and proposed laws curbing the profiteering activities of landlords and speculators. Unfortunately all issues providing relief by the provision of financing for new building failed to pass the special session called to meet the housing shortage. Several bills were passed, however, tending to definitely curb speculation and rent raising. One interesting bill which has become law in New York exempts from local taxation for a period of ten years all new housing construction. In view of the present tax rate in New York this means a definite saving of about 30 per cent of the cost.

The legislators have also appealed strongly for federal action as follows:

1—Institute immediately a sweeping investigation of the building materials industry to ascertain if a combination exists designed to keep up the present prohibitive prices of building materials.

2—Grant priority shipment rights to building materials, second only to the priority transportation of food and coal.

3—Place an embargo on the shipment of building materials to foreign countries.

It is interesting to note that the "sweeping investigation" referred to has been instituted and material men have been called upon to report what can be done toward lowering and stabilizing prices. In these days of sudden reversals of judgment it is very difficult to make definite statements. Knowing conditions intimately, however, we are inclined to discount entirely the theory or accusation of price-fixing control in the building material manufacturing industry. Allan E. Beals of the Dow Service Building Reports, in a recent analytical article in the New York *Times*, makes these statements with which we agree entirely:

"Groping about for an underlying cause for the housing shortage, the public mind has been filled by inference and innuendo with the belief that a great building material trust or combination exists for the sole purpose of keeping basic building material prices high without regard to production capacity or demand.

"When the government officials charged with the duty of shaping industrial policy toward the winning of the war first viewed the national scope of the building material industry, they also were inclined to believe that no industry producing more than $1,700,000,000 worth of building commodities every year could possibly be conducted without some policy-shaping head. But, after careful scrutiny into the innermost fundamentals of the industry, the various boards, commissions, departments and individuals, finding no such cohesion as had been imagined, finally had to appeal to the patriotism of the various industries as separate entities in all parts of the country to sink their inter-trade antagonisms and merge their endeavors, plant capacities, and frequently organizations, temporarily to insure adequate supplies to accomplish the national aims. Promoters of great industrial and trade combines always work along the lines of mutual interest and natural trade alliances. What more diversified field could possibly be found than in the building material and equipment manufacturing industry?

"There are some 3,000 different items that can enter into the erection and completion of a modern structure in the form of materials or equipment. Common brick manufacturing interests certainly have no industrial relationship to the manufacture of lumber. As a matter of fact, they are rival building commodities. So brick, both common and face, is a competitor for public favor, with cement as a component of concrete. Lumber interests are as widely separated from the steel manufacturing interests of the country as anything that can be imagined, and so are such items as plaster and lime and hardware and glass. Building stone is in direct competition with architectural terra cotta, and so on down through the entire building material industry."

In view of the fact that approximately $2,500,000,000 worth of proposed construction work is tied up throughout the country, the recent meeting of the National Building and Construction Congress in Chicago has set in motion machinery for a scientific survey of the industry in order to develop remedial measures with every component activity

in the building field working in unified harmony.

The facts just given represent only a small part of the general interest in this subject which is being manifested in every section of the country. It is evident that the results of such intensive public interest must be felt within a short period by a renewal of definite activity in many classes of construction, particularly those designed to relieve the housing shortage which is being felt in every part of the United States, particularly in centers of industrial activity and in the larger cities.

Recently there has been in the middle West and Eastern states a considerable reduction of prices in basic building materials of several classes. It is evident, however, that this condition cannot be taken as a definite sign that building costs are to be lower. Sales made at lower prices are usually found to be the result of "dumping" which generally follows when consumers show reluctance to purchase. The great obstacle at present is the lack of financing, and once building loan money is generally released building material prices will probably stabilize at a fairly high level until production can meet the successive rushes of demand as financing is provided and projects now held in abeyance are placed under active construction.

The development of powerful public demand, as evidenced by the activities herein outlined, is certain to have its effect in increasing the volume of construction and it is a fair deduction that the offices of architects and engineers will be much busier within a short time, probably immediately after the country settles down from its interest in the presidential election.

Senator Calder Places Construction First in National Rehabilitation

DEFERRED construction has been classed by Senator William M. Calder, Chairman of the United States Senate Committee on Reconstruction, as part of the war debt of the country and as a first creditor which must be satisfied before adequate earning power for the payment of the war debt can be created.

"The cause of many of our difficulties," he said, "has been federal interference, and the cure must be not only in the removal of this interference, but in the encouragement of construction work of all kinds by the federal government in order that the health and earning power, and, therefore, the credit, of the nation may be restored.

"What can this Committee recommend to break down the barriers between the willing buyer and the willing seller? From testimony of experts and practical builders, manufacturers of materials, of bankers and engineers, it appears that the initial obstacle is transportation. Many projects have been started but cannot be completed because they cannot get transportation for the necessary materials, while the season for building, to relieve conditions during the coming year, is fast slipping by."

"As to taxation, it has been represented to this Committee that this is the basic difficulty in the construction industry, for the tendency of the times seems to have been rather toward trading in the products of the old plant than investment of money in a new and more efficient plant.

"A revision of the taxation system, which would throw the burden of taxation upon expenditures rather than upon savings, which would not discourage private initiative and would not throw capital into exempt securities, has been strongly urged.

"The attention of the civic committees throughout the United States should be strongly directed against profiteering in finance. The man who is willing to build a home should be given long-term accommodations in loans equal to those accorded the farmer under the Farm Loan Bill. Investors in property should not be harassed by bonus requirements, which are now being resorted to by money lenders, I am sorry to say, in order to evade the usury laws.

"I am pleased to say that encouraging reports have been received from places throughout the country as to the increasing efficiency of labor. This efficiency should be met with a corresponding efficiency and a non-disposition to profiteer in the production of materials.

"The price of building materials has practically doubled since the war, and while in some cases this is due to profiteering on the part of the producers, it is in many cases caused by speculation due to the uncertainties of transportation. It must be borne in mind that the increased cost of transportation has greatly affected the basic costs of building materials."

Senator Calder said that builders calculate that the average cost of materials today is $2.40, as against $1.00 prior to June, 1918.

"In granting the increase of 40 per cent to the railroads, I am glad to say that the Interstate Commerce Commission, after reviewing the building situation, has recommended to the carriers that they give consideration to the hardships imposed upon the building industry and grant relief where necessary. This Committee has already taken the initiative and made representations to the carriers as to the ultimate effect of greatly increased cost of building materials upon housing and other construction; it is argued that the prosperity of the country depends upon the prosperity of its basic industries, and that, if construction is hampered, the country cannot grow and that, therefore, in the long run, the carriers will be deprived of business which might otherwise fall to them through general prosperity.

National Certification of Architects

A SUGGESTION FOR JURISDICTION BY THE AMERICAN INSTITUTE OF ARCHITECTS

By W. W. BEACH

THE practice of architecture has ever offered peculiar attractions to the charlatan and the crook, just as have, in their own ways, the professions of law and medicine. These latter have, however, been able to hedge themselves about through the entire country with stringent laws and regulations which serve to render exceedingly uncomfortable the path of any individual who attempts to enter such practice unprepared or, later, to make use of unprofessional methods while pursuing that practice.

Not so in architecture. Less than half of our states have passed laws attempting to control the profession and none of these can be considered entirely satisfactory. Not all architects believe that practice should be licensed, but all who favor such restriction are agreed that a national law would be an improvement over separate state measures.

In discussing the subject, it would be well, perhaps, to give consideration, point by point, to those things that may be expected to be gained by the institution of any supervision over the personnel of the profession.

First, then, is the elimination of the man of insufficient preparation. Such a one can, by the offer of low fees for services, acquire clients who later, consciously or not, are forced to pay for the architect's further education and experience. Such "architects" materially lower the standard of practice and, at the same time, the public regard for those who follow it.

Next should come about the passing of the charlatan who deliberately prostitutes his calling by soliciting employment both through the offer of cheap drawings and specifications and by submitting worthless "guaranteed" preliminary estimates; then later recoups through contractors and material men, at the expense of the client. This individual, even more than the ignoramus, serves to bring odium upon us and tends to reduce our whole average reputation. Why owners will continue to employ as architects (super purchasing representatives) men whom they would not trust as ordinary purchasing agents passes comprehension; but they do.

Third, we may also expect the relegation or regulation of the self-styled "architect-and-builder" and "architect-and-engineer." The public should have some means of judging such individuals or concerns other than by their advertising matter and completed work. The latter may be the product of a capable employe who may not be available for the next commission. This is true of any architect, hence again the necessity for limiting to the capable the use of the appellation.

And fourth, we should anticipate direct benefit to the public as well as to ourselves through the improvement that would be brought about in structural economy and design. Not only do the ignorant architect and the shyster copy misapplied design and details, guess at the strength of material required, and at the shape and size of the cross-section needed to meet such requirements but, through carelessness in drafting, checking and specification writing, betray their clients' interests at every stage of procedure. This is done as often by sheer waste of material as by ill-considered saving.

Where all is guess-work, little can be correct. But, when failure or loss is disclosed, the penurious owner who sought to economize by employing cheap talent is the first to cry out against the whole tribe of architects. Who suffers most?

Fifthly, we may consider the possibility of improvement of the status of the architect in the opinion of the contractor. Much is to be gained by increasing his respect for the average of us. The lax architect produces the lax builder and, inasmuch as the burden of the success or failure of a structure rests more on the former than on the latter, the contractor cannot be blamed for taking every possible advantage and profiting accordingly. Nor is it surprising to find him frequently backing for employment that architect who has pandered to his gain, rather than one who makes his work more difficult.

Now, if these five nightmares of our profession (the ignoramus, the shyster, the hyphenated, the "jerry-building" and the misguided contractor) might be eliminated or at least modified, controlled or materially reduced, how manifestly better would the public be served and how much discomfort would be subtracted from our daily toil.

State laws have helped in this, no doubt, but to them there are certain minor objections that cause their promulgators to be more or less lukewarm in their propaganda in many states, especially in those where the ethical practitioners are outnumbered by their unprofessional confrères.

One fault is that all such laws, when put into effect, must grant recognition to all individuals then practising, regardless of their fitness, reputation or character. Thereafter it takes a generation to weed the rascals out.

Another objection is that the state machinery for the administration of such laws is liable to be unwieldy and expensive—and this cost must be borne by the profession. Further, there is ever the danger of the admixture of politics.

Again, it is difficult to establish and maintain a standard sufficiently high. For instance, if a good college of architecture happen to be located within the state, it may be hard for legislators to see why

graduates of such institution should not be granted license without further experience or examination, as is the case with lawyers, doctors and dentists. It is not generally understood that the faculties of architectural schools make small pretense of preparing men for independent practice, but that custom dictates that such graduates shall supplement their technical education with years of training in the offices of competent architects.

On the other hand, it should not be made impossible for a man to prepare himself for practice without having been graduated from an accredited school, no matter how unusual such procedure. Standards should be high and comprehensive, not dogmatic.

All these factors and more have been taken into consideration in working out a scheme for the examination and certification of architects throughout the entire country in a way that should be at once both feasible and efficacious.

It is simply that such certification shall be provided by the American Institute of Architects, independent of membership in that body.

The success of such measure would depend, of course, upon the number of architects who availed themselves of the privilege. But, is it not to be assumed that, if registration and certification are made simple and convenient for those who are capable, it would become as popular as is the process of admission to the bar on the part of young lawyers?

In debating this question, it were well to consider what are the influences now operating to restrain from joining the Institute many who would be fit candidates. Why would not these same causes limit the number of applicants for the suggested certificates?

Again we have recourse to an analysis:

1. Membership in the Institute is quite altruistic in its objects—any good to be derived therefrom is primarily that accruing to the entire profession or to the public at large. It is easy for the outside architect to persuade himself that Institute affairs will be properly administered and its welfare advanced without his collaboration.

On the other hand, registration is primarily selfish in its aims, though the ultimate good to be derived must be shared by all who are deserving.

2. Institute membership involves an appreciable tax on the man with a small income, an annually recurring assessment.

Registration, under Institute control, could be handled at a small initial expense and no annual due charges. Thus, if it be provided that a man is made eligible for certification by receiving the endorsement of ten registered architects, two of whom were Institute members, a fee of five dollars would likely cover all attendant expenses of the Institute bureau in charge.

If the limited acquaintance of the candidate rendered impracticable the securing of the necessary number of sponsors and made an examination necessary, then the expense of such examination would need to be added to the fee.

But, once having declared a man eligible to practise, there would be no object in having to renew the declaration year by year nor in maintaining expensive machinery for the purpose as is now done by those states where license is in vogue. The certificate granted could remain the property of the Institute, loaned to the user and revocable at the discretion of the officers of the Institute.

3. Many architects consider that, if one of a firm is an Institute member at the expense of the firm, then is its loyalty to the profession satisfied and the reason for another membership nil.

This excuse would not operate against inexpensive registration, if it were demanded by the public. All members of a firm would be expected to have equal professional standing. Again, as to this attitude of the public: it has for a long time looked to the profession to purge itself of the undesirable, while we have put upon the public the burden of the riddance. Whose is the duty and who can perform it most readily? When the public is finally stirred to attempt the task, we are asked to foot the bill. That being the case, let us get about it in a much more effectual and economical way.

4. The public takes no cognizance of Institute membership. This is because there are many able architects who are not members of the Institute, thereby discounting the prestige of the national body. Campaigns for increased membership have been effective but not all-embracing. To go much further would be to let down the bars to an inexpedient degree. There are many practitioners fit for registration who would not make good Institute timber. With certification in vogue, it would soon be a matter of course with all who could secure it.

5. Many architects, remote from centers of large practice, do not feel enough "community of interests" with their fellows to really count it worth while to join forces with men who might deem them outsiders. To these certification would have a quite different aspect.

6. We know architects who cherish strong and conscientious resentment against certain Institute members because of unprofessional conduct (real or imagined) which worked to the disadvantage of the non-member.

The withholding of Institute support by these is on par with the excuse of those who abstain from church membership because of the hypocrisy of some of the pillars therein. There will likely be some in the Institute who are unfit as long as there are hypocrites in the churches. Objectors on this score would be among the first to endorse registration and certification.

7. And there are always those who "intend to go into the Chapter some day"—"when they get around to it" or "when a different set of fellows gets into control" or simply when they can make up their minds to expend the effort and cash.

These procrastinators will always put things off

but, in lesser numbers, if the public manifests a preference for registered architects—as it surely will.

Arguments against the inauguration of the venture may be summed up as follows:

1. It would be purely experimental and the result very much in doubt. Failure would be worse than no trial.

Any departure from established precedent is experimental. The conservative who refuses to experiment with the uncertain is reactionary. Through the years of existence of architectural practice almost nothing has been accomplished by the profession at large to make easier the path of the average practitioner, except in a few states, as has been noted. It will take further generations to extend licensing throughout all the states and then another generation still to make it effective. How much more quickly and surely could Institute regulation be inaugurated!

2. It would reduce Institute membership by causing many to substitute registration.

Perhaps; but, on the other hand, it is more probable that the Institute, by the inauguration of a measure of such practical value to the entire profession, would win as converts many high class men who have hitherto refrained from joining because of a feeling that the Institute fails to accomplish things of real benefit, except to a chosen few. (There are many of these who are more familiar with Chapter limitations than with the larger activities of the Institute.)

3. It would render useless the machinery already upbuilded in some states for the accomplishment of a like purpose.

So be it. It is better that this should be wasted than that many should continue to suffer needlessly because a few are satisfied. But there is strong probability that it would also help the few by adding just that one further restriction which they now lack to protect themselves against the crook who rode in on the law when it was put into effect. If national registration were placed on a higher plane than state license, he would find himself bereft of the standing to which he now pretends.

Then there follows as matters of course the two chief reasons why registration and certification by the Institute transcends all regulation by license.

First, its adoption lies entirely within the will of members of the profession. No public propaganda is necessary to its inauguration.

Second, its administration remains with the same body, free from politics or other questionable control.

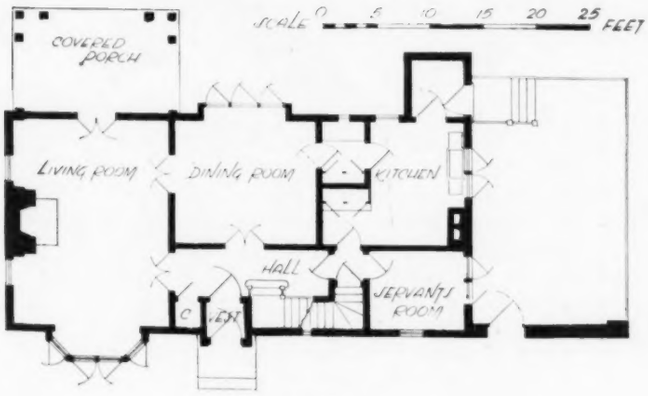
Query: Isn't the time already at hand when the American Institute of Architects may be considered sufficiently representative and influential a body to warrant its initiating just this measure for the great good of the profession at large and that public which they seek to properly serve?

Old English Cottage of Early Georgian Character
Note the leaded casements simulating double-hung windows

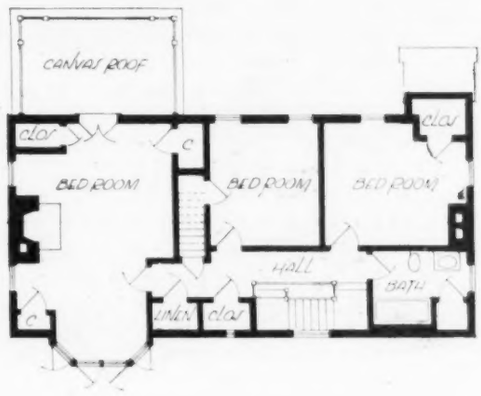
A Small Country House in Belmont, Mass.

STANLEY B. PARKER, ARCHITECT

MAIN FRONT FROM THE STREET



FIRST FLOOR PLAN



SECOND FLOOR PLAN

EDITORIAL COMMENT

THE ARCHITECT'S POLITICAL DUTY

UNDER normal conditions in the building industry, as represented by the period before the war, the interest of the average architect or builder in the question of politics was of a more or less perfunctory nature, confined principally to local issues. The coming presidential election, however, with its resultant establishment of certain fundamental policies, is of more importance to the building industry than any other single factor or condition which may be mentioned at this time.

The reason for this is simply that among the great issues of today are several of fundamental importance to the building industry. The railroad question, the shipping question, problems of international finance, the question of rural development, the coal question, and many others which may be mentioned as affecting directly the prosperity of our industry in the years to come, depend, however, upon the attitude of the government as expressed by those in executive power.

It is not our purpose to express any political preference, either Republican or Democratic, but it is our purpose to direct the attention of architects and builders throughout the country to the tremendous importance of the results of this election in its effect on conditions in the industry.

As never before it is the duty, not only of architects and builders but of every business man, to give serious consideration to the issues which are at stake and to the qualifications of party platforms and representatives. During the past few years there has been a great volume of emergency construction, but the building industry in general has suffered. Although it is one of the powerful industries of the United States (which has to play a most important rôle in national rehabilitation), it has not been accorded the attention and encouragement of which it is deserving. In fact, we can only realize the importance of the building industry when, as is the condition today, business and living conditions are seriously crippled because of the lack of proper building space.

Not only is this industry seriously affected at present by poor transportation conditions, but it is utterly lacking in the necessary financial backing which will make possible a continuation of building operations at a rate sufficient to meet normal needs, without consideration of the need for catching up with lack of production in finished buildings during the past few years.

There can be no question but that a great movement is to be expected in building construction. Already there are signs of such a movement, and the drop in material prices which has recently occurred may be construed as a lull before the real storm of building sets in.

The old law of supply and demand is beginning weakly to function again in relation to labor supply. After the election the building industry may expect unusual stimulation. To what extent this coming activity may be placed on a possible and profitable basis depends largely on financial conditions. If the results of the election are encouraging to business, and particularly to strong financial interests, there is no doubt that relief may be felt from the pressure which has recently blocked much activity in the field of building construction.

In the past, many good men have given comparatively little consideration to the issues of politics and have voted not from a sense of inner conviction or knowledge of the attitude of the party which they wish to place in power, but rather because of other motives such as environment, hearsay, or other comparatively unimportant reasons. Consequently there are many men, who have made politics a business, who design to meet their personal ends rather than to bring the greatest good to the greatest number. This year, as never before, the thinking voter must turn out to work according to his definite convictions in order that the politics of personal motives may be supplanted by the politics of an intelligently voting nation of people.

If the coming great election results in the casting of a record vote in which the average vote has received serious personal consideration, there is little question but that the outcome will be beneficial to the building construction industry. The next few years must constitute a business era of an unprecedented nature in which there shall be closer cooperation between the fundamental industries and the financial resources of this country. Politics, as a means to an end, must be discarded in favor of national business organization. The government must, as never before, be placed upon an efficient business basis in order that it may function to the best interests of the business men of the nation, and when this is done the resultant stabilization, while it may not bring a "business boom" condition, will create sound financial and production conditions which, in turn, will prove beneficial to the consumer.

Consider, therefore, not only the personalities of the candidates who are placed before the public for selection, but the business qualifications of the party platforms. The next few years will be no time for theory or academic experiments. They must be serious, practical years devoted to the rehabilitation of business conditions, backed by a strong national government which not only realizes the needs of the country's great industries, but which will recognize them and will attempt, in a serious and not too experimental a manner, to solve the problems which are before us today.

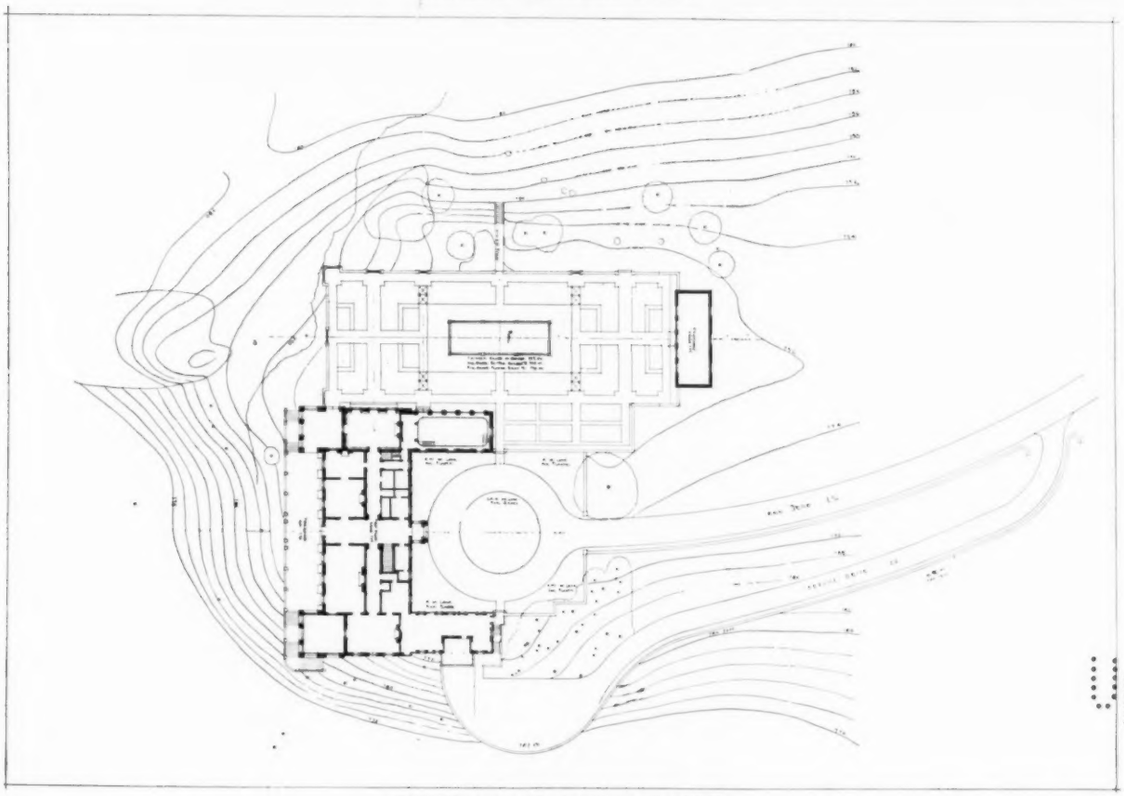
Let good men, therefore, enter into the spirit of the political situation as never before and determine, with the wise consideration which each gives to his own business, how best to create a national government which in itself constitutes a great and efficient business organization functioning in behalf of its stockholders,—the citizens and taxpayers.

DETAIL OF TERRACE FACADE

HOUSE OF EUGENE MEYER, ESQ., MT. KISCO, N. Y.

CHARLES A. PLATT, ARCHITECT

DETAIL OF ENTRANCE FACADE



PLOT PLAN AND GARDEN LAYOUT

HOUSE OF EUGENE MEYER, ESQ., MT. KISCO, N. Y.

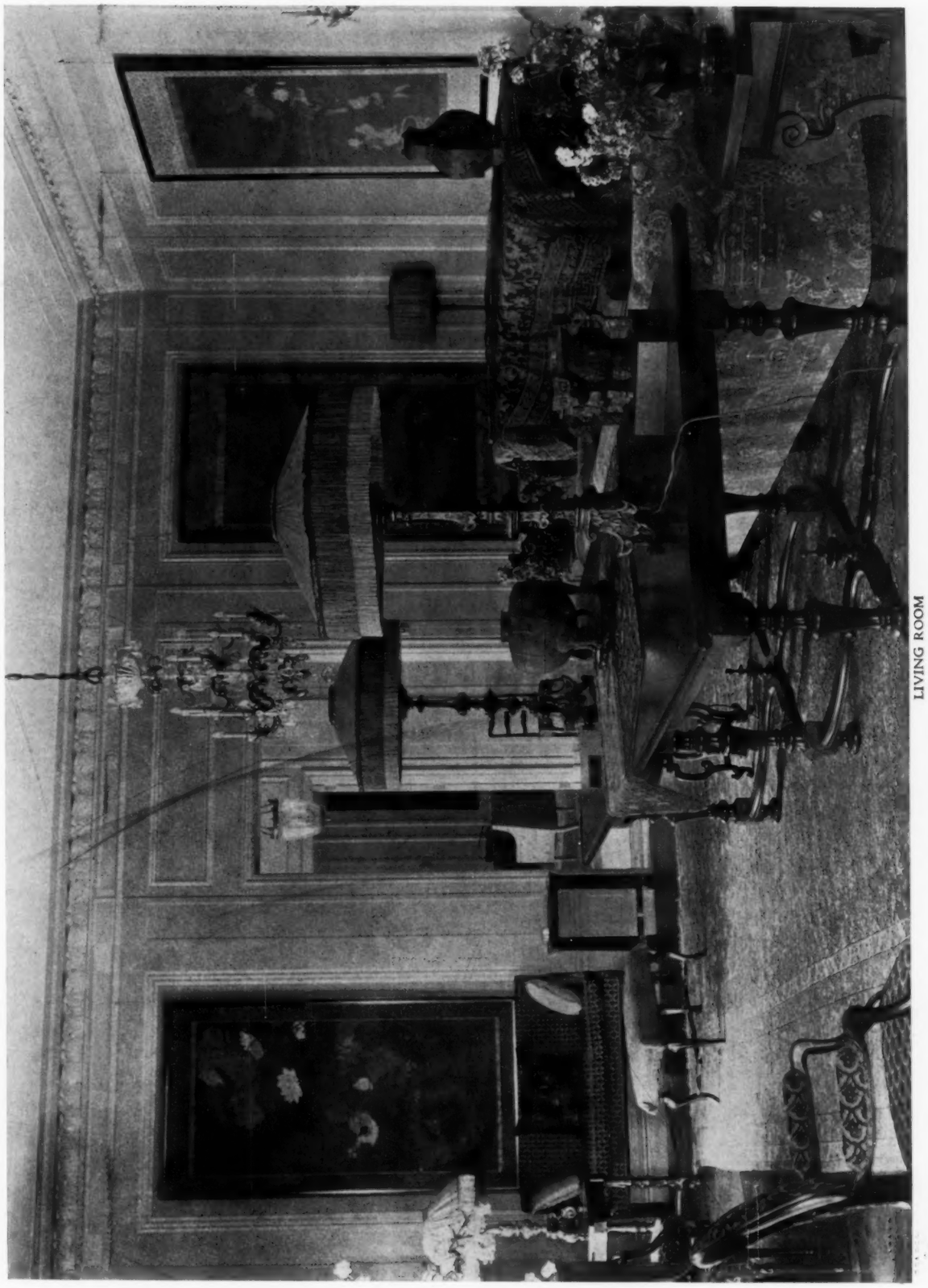
CHARLES A. PLATT, ARCHITECT

WEST WING FROM GARDEN

LIBRARY BAY ON WEST FACADE

HOUSE OF EUGENE MEYER, ESQ., MT. KISCO, N. Y.

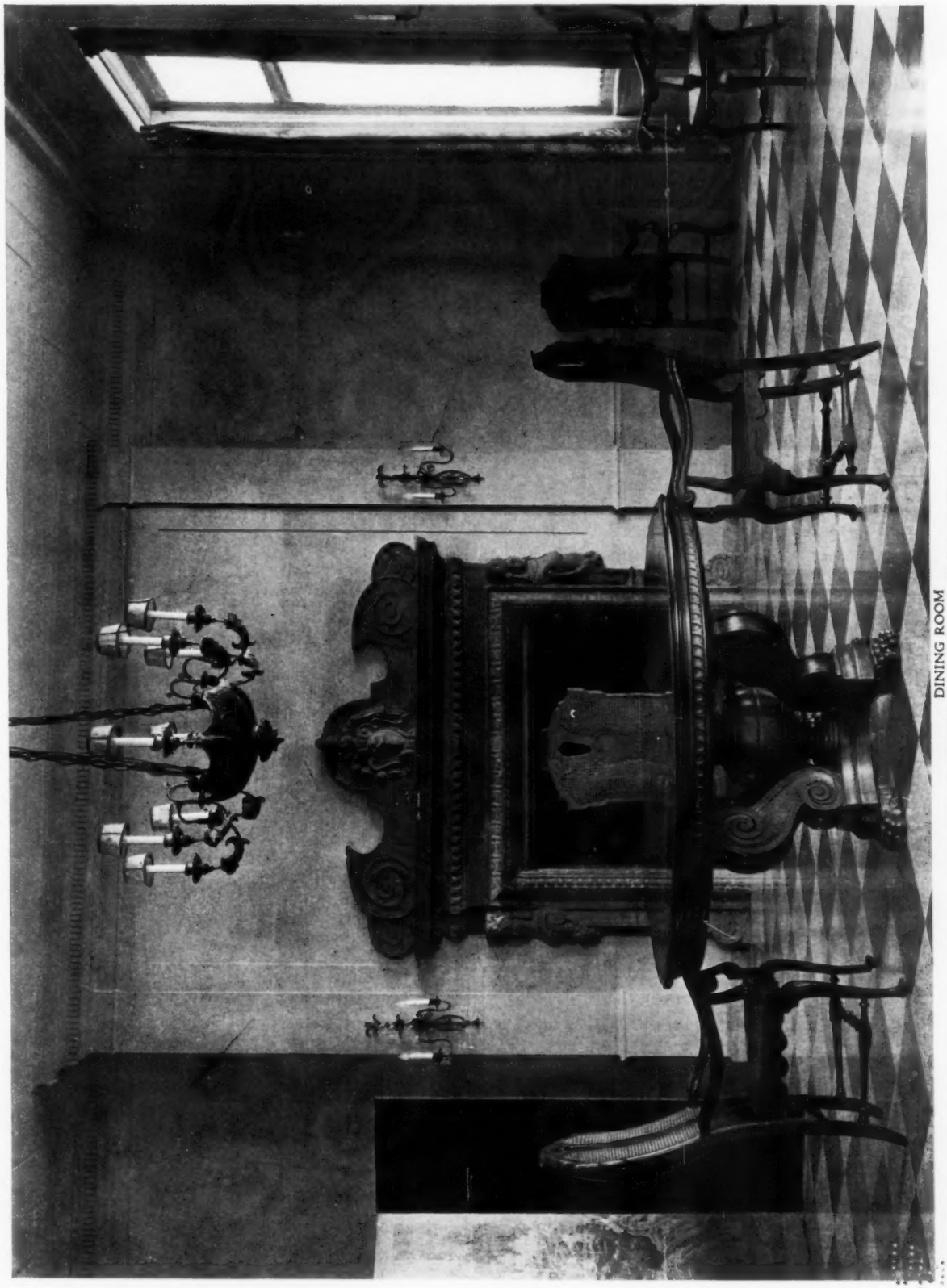
CHARLES A. PLATT, ARCHITECT



LIVING ROOM

HOUSE OF EUGENE MEYER, ESQ., MT. KISCO, N. Y.

CHARLES A. PLATT, ARCHITECT



DINING ROOM
HOUSE OF EUGENE MEYER, ESQ., MT. KISCO, N. Y.
CHARLES A. PLATT, ARCHITECT

LIBRARY

LIBRARY CORNICE DETAIL

HOUSE OF EUGENE MEYER, ESQ., MT. KISCO, N. Y.

CHARLES A. PLATT, ARCHITECT

ENTRANCE FRONT

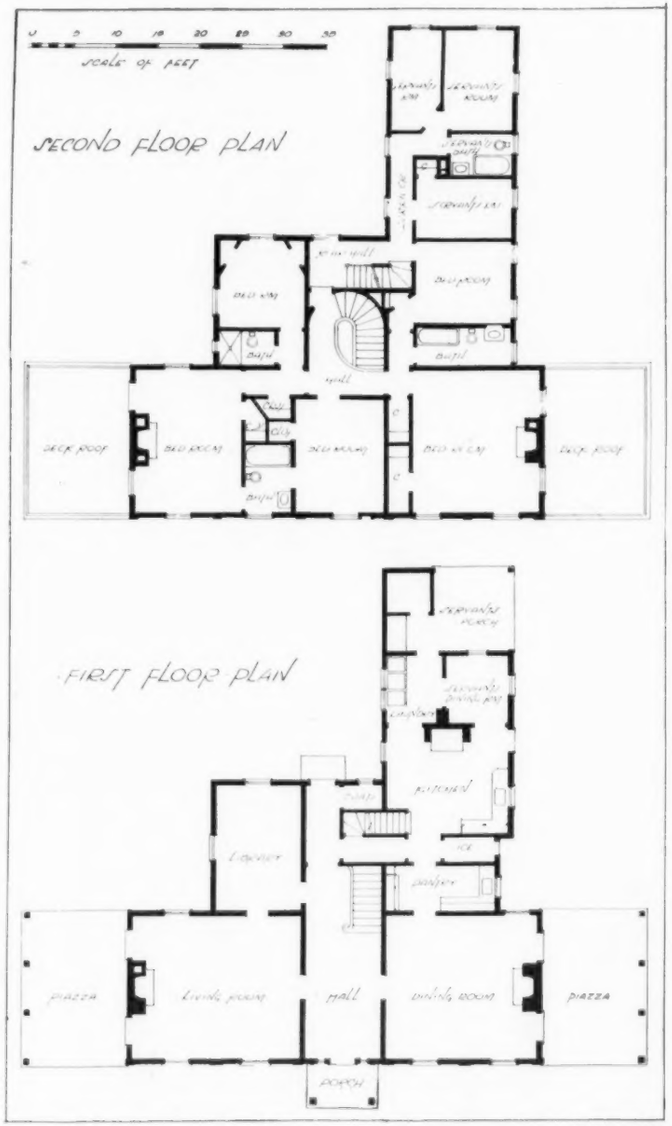
HOUSE OF SAMUEL OUTERBRIDGE, ESQ., OYSTER BAY, LONG ISLAND, N. Y.

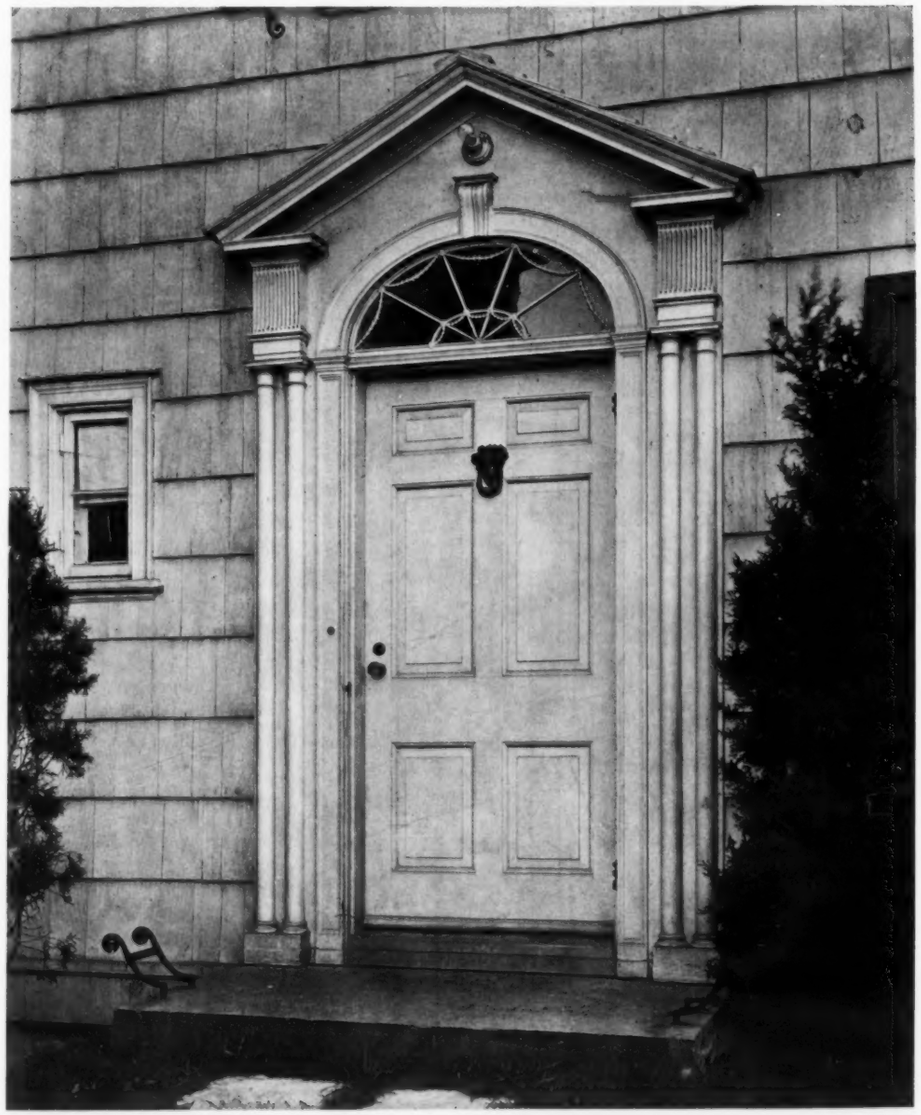
ELECTUS D. LITCHFIELD, ARCHITECT

DETAIL OF ENTRANCE PORCH

HOUSE OF SAMUEL OUTERBRIDGE, ESQ., OYSTER BAY, LONG ISLAND, N. Y.

ELECTUS D. LITCHFIELD, ARCHITECT

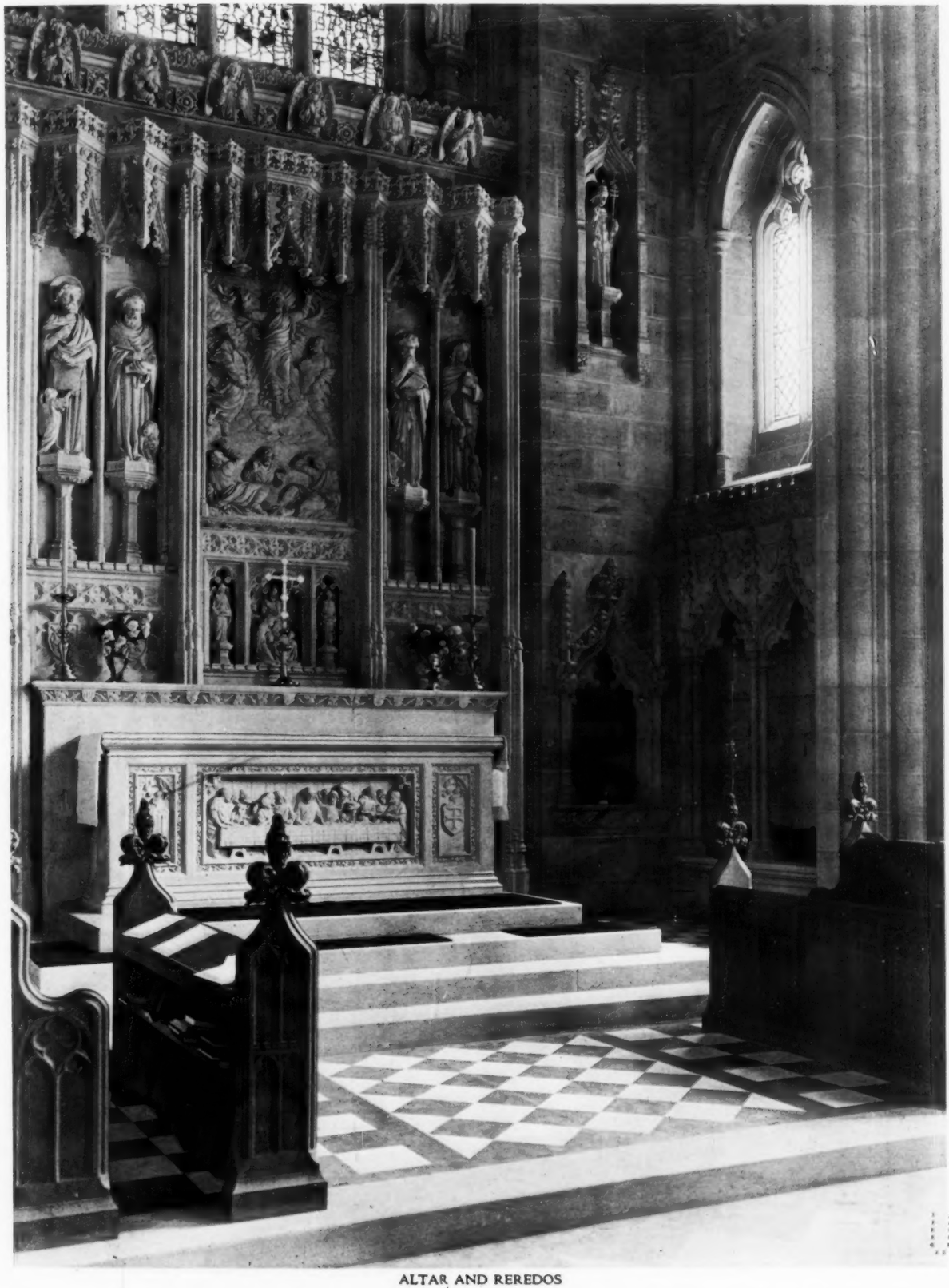




FLOOR PLANS AND DETAIL OF GARDEN DOORWAY

HOUSE OF SAMUEL OUTERBRIDGE, ESQ., OYSTER BAY, LONG ISLAND, N. Y.

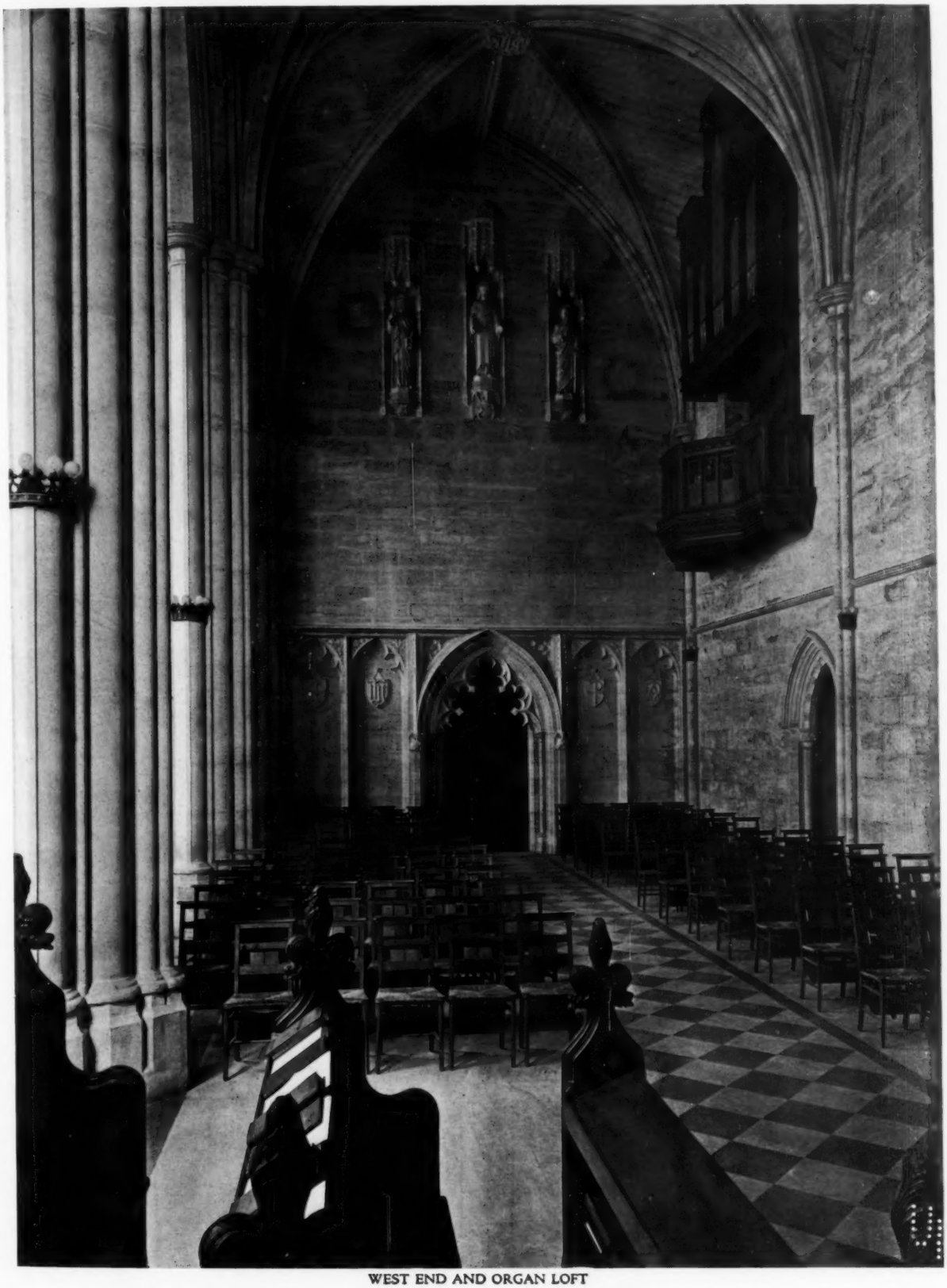
ELECTUS D. LITCHFIELD, ARCHITECT



ALTAR AND REREDOS

ST. JAMES CHAPEL, CATHEDRAL OF ST. JOHN THE DIVINE, NEW YORK, N. Y.

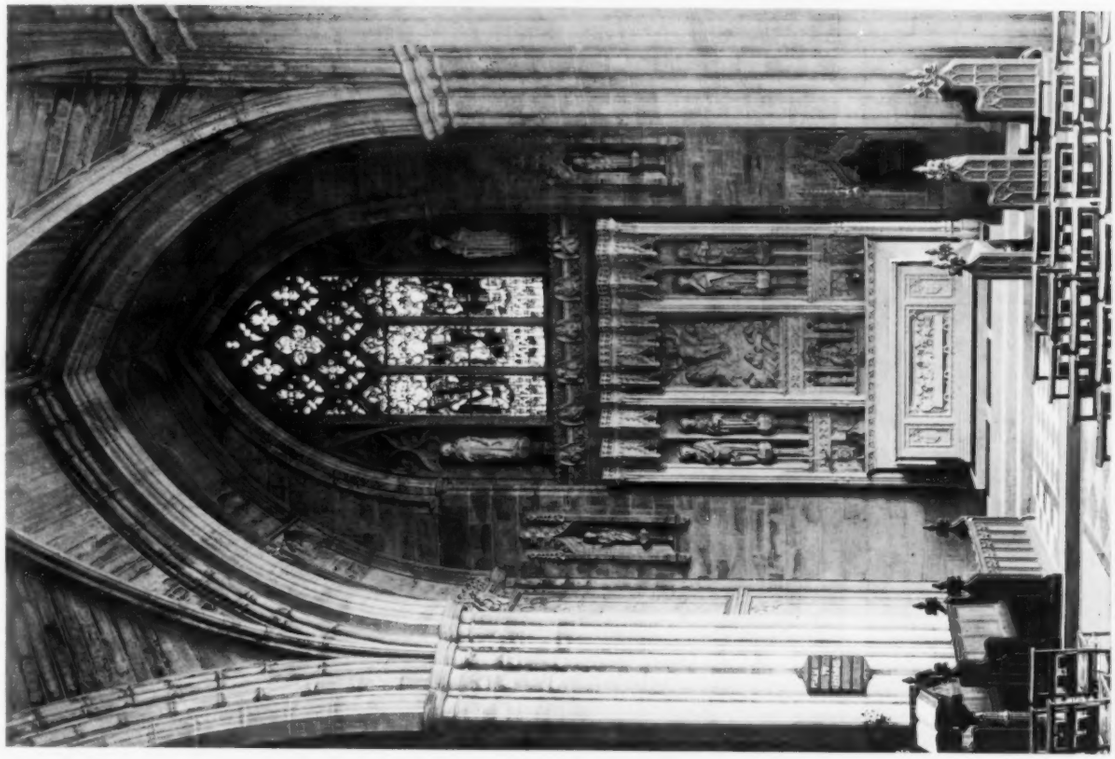
HENRY VAUGHAN, ARCHITECT

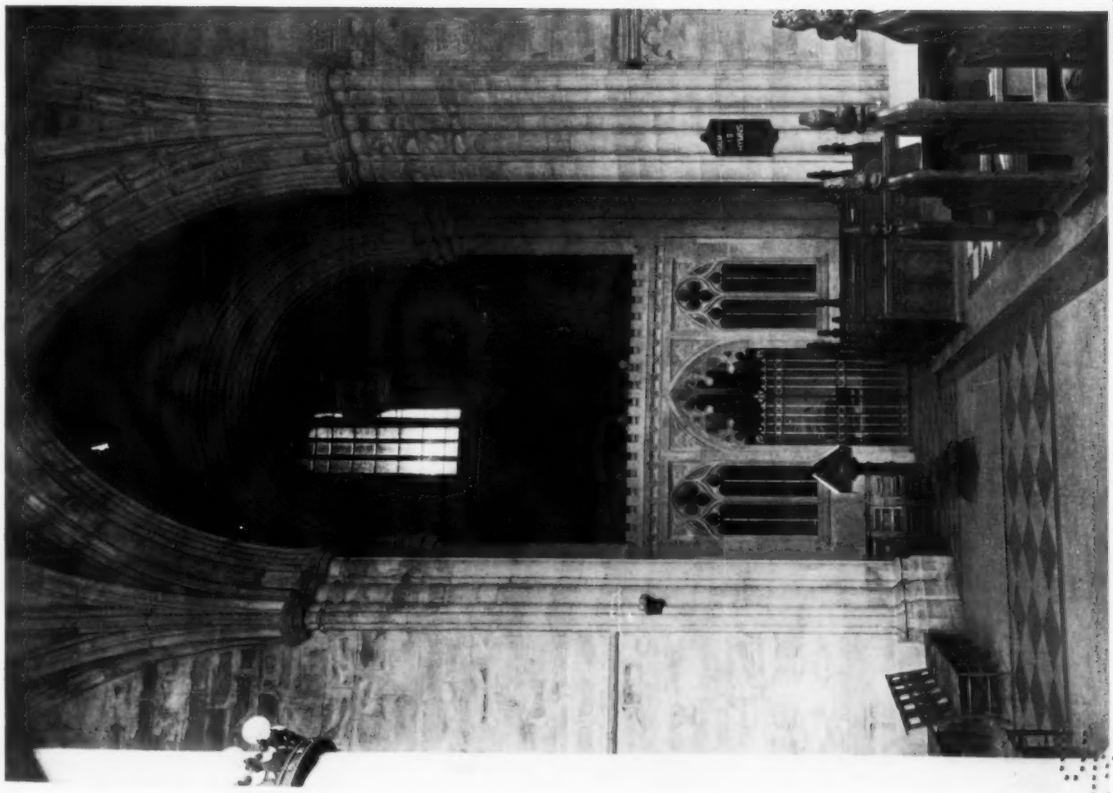


WEST END AND ORGAN LOFT

ST. JAMES CHAPEL, CATHEDRAL OF ST. JOHN THE DIVINE, NEW YORK, N. Y.

HENRY VAUGHAN, ARCHITECT

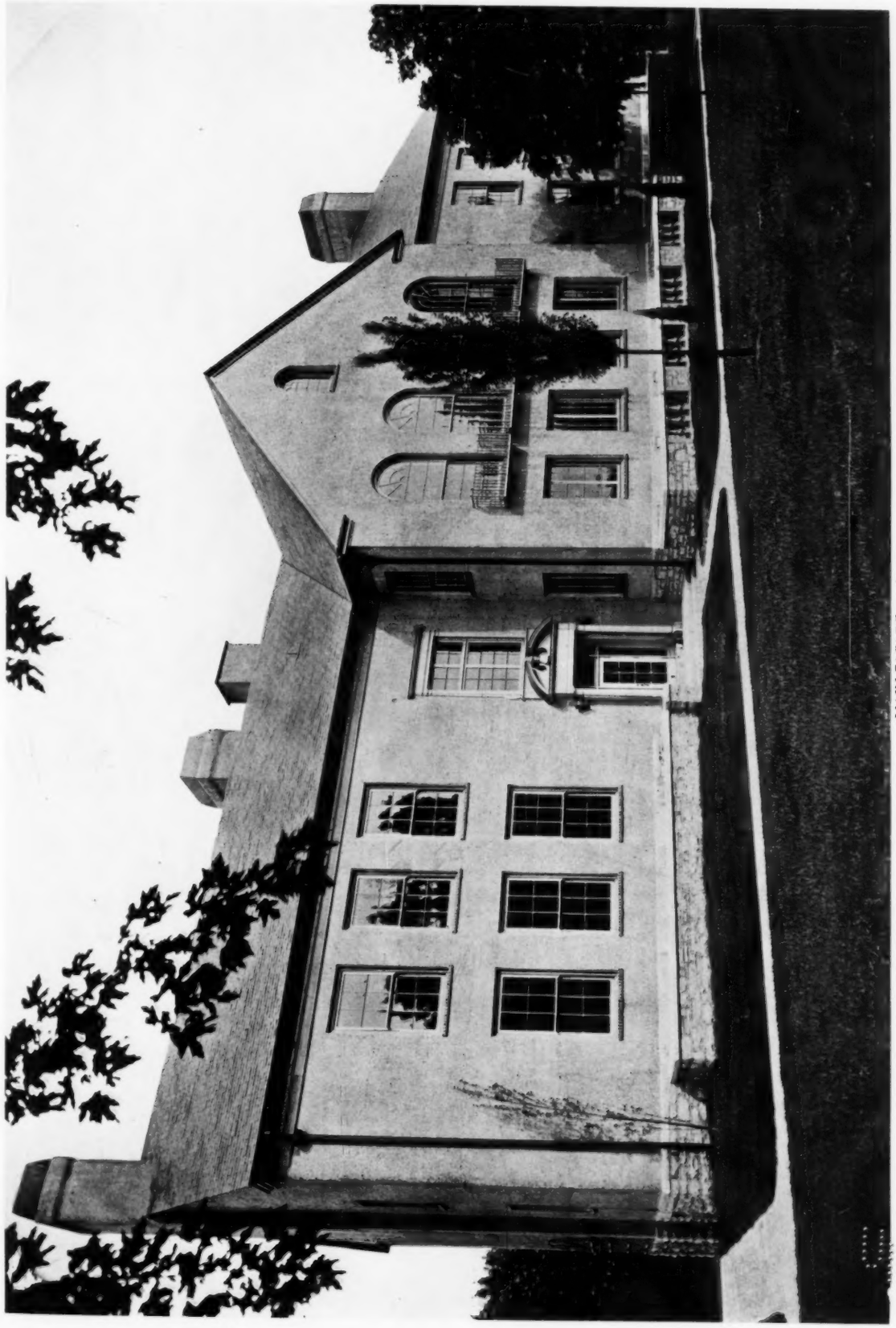




VIEWS TOWARD CATHEDRAL CHOIR AND EAST END

ST. JAMES CHAPEL, CATHEDRAL OF ST. JOHN THE DIVINE, NEW YORK, N. Y

HENRY VAUGHAN, ARCHITECT

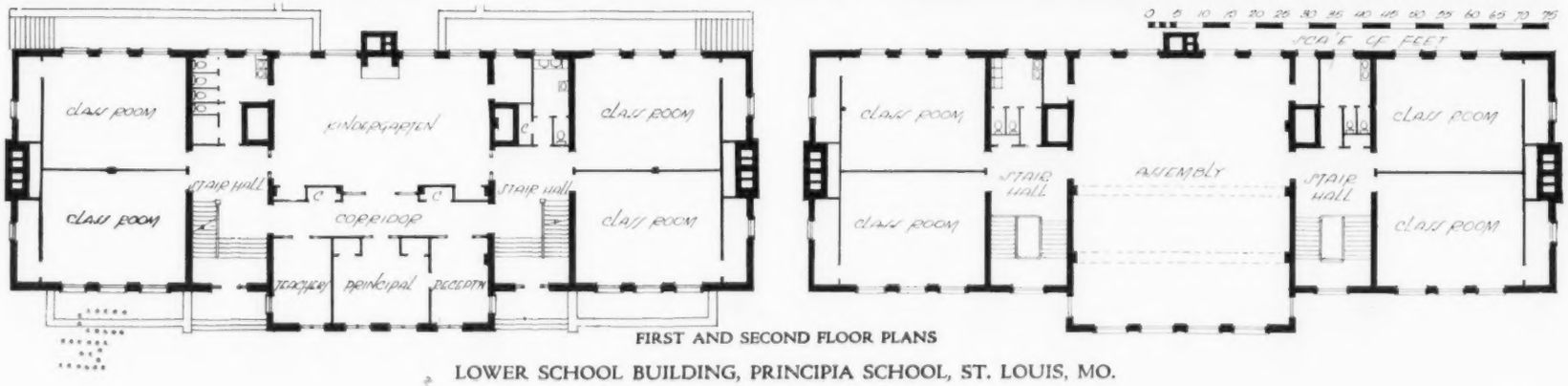


MAIN FACADE

LOWER SCHOOL BUILDING, PRINCIPIA SCHOOL, ST. LOUIS, MO.

WILLIAM B. ITTNER, ARCHITECT

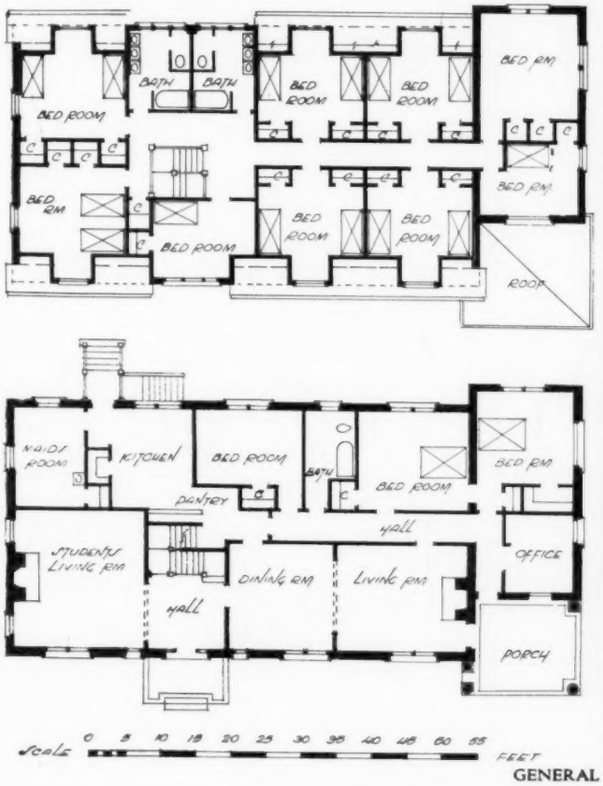
KINDERGARTEN AND TYPICAL ENTRANCE



FIRST AND SECOND FLOOR PLANS

LOWER SCHOOL BUILDING, PRINCIPIA SCHOOL, ST. LOUIS, MO.

WILLIAM B. ITTNER, ARCHITECT



GENERAL VIEW

GIRLS' DORMITORY, PRINCIPIA SCHOOL, ST. LOUIS, MO.

WILLIAM B. ITTNER, ARCHITECT

GATE HOUSE AND STAIRWAYS

COMPTON HILL RESERVOIR, ST. LOUIS, MO.

GUY STUDY & BENEDICT FARRAR, ASSOCIATED ARCHITECTS